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SENEWÉLETS

CULTURE HISTORY OF THE NANAIMO COAST SALISH AND THE FALSE NARROWS MIDDEN

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TABLE OF CONTENTS

	Page
List of Figures	4
List of Tables	5
Acknowledgements	6
Introduction	7
The False Narrows Midden: Local Context, History and Investigation	10
Physical Environment of Gabriola Island	10
History, Ethnography and the Nanaimo Coast Salish	11
Archaeological Research in Historic Nanaimo Territory	12
The Archaeological Investigations of Senewélets	13
The False Narrows Artifact Assemblage	19
Artifact Classification	19
Raw Materials and Interpretations of Trade	19
The Delineation of Cultural Components	26
Excavation Unit Six	26
Excavation Unit One	33
Excavation Units Two and Three	35
Other Excavation Units	35
Component Correlation and Summary	35
Culture Historical Comparisons	38
False Narrows I and II	38
False Narrows III and IV	40
Summary	41
Settlement Pattern Interpretation	43
Intra-site Settlement Features	43
False Narrows Within Regional Settlement Pattern	46
False Narrows Burial Population	51
Physical Population	51
Burial Patterns	52
Grave Goods, Wealth and Social Stratification	59
Conclusions	63
References Cited	65
Appendix A — Artifact Descriptions	69
Flaked Stone Artifacts	69
Ground Stone Artifacts	81
Ground/Pecked Stone Artifacts	96
Bone Artifacts	101
Antler Artifacts	117
Shell Artifacts	125
Miscellaneous and Historic Artifacts	130

LIST OF FIGURES

Figure		Page
1	The Gulf of Georgia Region and the Location of Senewélets	7
2	Culture Historical Sequences For the Gulf of Georgia Region	8
3	False Narrows Site Map and Excavation Units of 1966 and 1967	14
4	False Narrows Site View 1967	15
5	False Narrows Erosion 1967	15
6	Unit Six Stratigraphic Profile	31
7	Unit Six Component Profile	32
8	Stratigraphic Profiles Units One and Three	34
9	Select Archaeological Sites Within the Gulf of Georgia Region with Culture Historical Relationships to False Narrows	39
10	Features 54a and 54b — Ash, Firebroken Rock and Posthole	46
11	False Narrows Petroglyph Panel at DgRw 198	49
12	Burial 44 — Rock Slab Interment Plan Drawing	53
13	Cairn — Burials 49 and 50, Feature 53	56
14	Burials 49 and 50	57
15	Burials 21, 25 and 27 — Multiple Interment	58
16	Burial 52	61
17	Flaked Stone Projectile Points	69
18	Flaked Stone Point Blanks and Other Bifaces	72
19	Flaked Slate Knives or Knife Preforms	75
20	Flake Tools	77
21	Edge Angle Frequency Distribution for Flake Tools	77
22	Cobble/Core Tools	79
23	Ground Stone Points	82
24	Ground Lanceolate Points	84
25	Ground Knives	86
26	Celts/Adze Blades	88
27	Abrasive Stones	91
28	Miscellaneous Ornaments and Inscribed Artifacts	93
29	Beetle Pendant and Anthropomorphic Head	94
30	Miscellaneous Ground Stone Artifacts	96
31	Mauls, Hammerstone and Stone Bowl	97
32	Sinker Stones	98
33	Fixed Bone Points	102
34	Bone Composite Tool Points	104
35	Bone Awls	107
36	Ulnae Tools, Bone Slitting Implements and Bone Needles	109
37	Bone Chisels, Wedges and Edge Tools	111
38	Bone Pin, Tubes, Bead and Other Inscribed or Perforated Specimens	113
39	Whale Bone Armlets	114
40	Miscellaneous Bone Artifacts	116
41	Unilaterally Barbed Antler Points	118
42	Antler Harpoons	120
43	Antler Wedges	122
44	Antler Pendants and Fish Hook Shanks	123
45	Inscribed Elk Antler Tines	125
46	Shell Tools	126
47	Shell Pendants, Rattles and Gorgets	128
48	Shell Beads	129
49	Miscellaneous and Historic Artifacts	131

LIST OF TABLES

Table		Page
1	Assemblage Taxonomy Applied to the False Narrows Site Catalogued Artifact Collection	20
2	Source Origin Identifications for False Narrows Obsidian Specimens	23
3	False Narrows Component Assemblages	27
4	Correlation Coefficient Matrix Between Components at False Narrows	37
5	Cultural Features Recorded During the 1966 and 1967 Excavation Seasons	44
6	Burial Features and Population Data for the False Narrows Site	54
7	False Narrows Interments Ranked by Grave Good Associations	60

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Originally, the False Narrows analysis formed one component of my Doctoral Dissertation at Simon Fraser University. Roy Carlson served as my supervisor and it was on his suggestion that I initiated work on the site assemblage. The original manuscript was typed by Linda Sears. Several of the figures were drawn by Kathy Stevenson and the photographs were printed by Jane Luke. The final draft was quickly typed by Denise Kask, and Heather Moon provided much needed editorial assistance. To each of the above, and the numerous others who I have failed to mention, I gratefully offer my thanks.

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INTRODUCTION

Senewélets is the name applied by the Nanaimo Coast Salish to one of their former seasonal villages on Gabriola Island in the Gulf of Georgia region of southwestern British Columbia. The term is a Halkomelem word meaning "go inside [narrows via] the back part" (Rozen 1985: 59). From ethnographic accounts, Senewélets can be situated along the shore of False Narrows, approximately 19 km southeast of the ferry terminal at Descanso Bay (Figure 1). False Narrows is a shallow (3-9 m deep) and restricted body of water separating Gabriola Island from Mudge Island. In regional archaeology, Senewélets has been referred to as the False Narrows midden (DgRw 4). Archaeological investigations at this site indicate a use that goes back at least 2,000 years. These investigations also reveal midden deposits that extend for a distance of 1.3 km along the False Narrows shoreline with some areas having a depth of over 2 m. The following volume examines the archaeology of this site and its significance for a culture history of the Gulf of Georgia region and the Nanaimo Coast Salish.

The False Narrows locale was inhabited by prehistoric and historic peoples whose subsistence depended in large part upon the bounties of the sea and its foreshore. The midden,

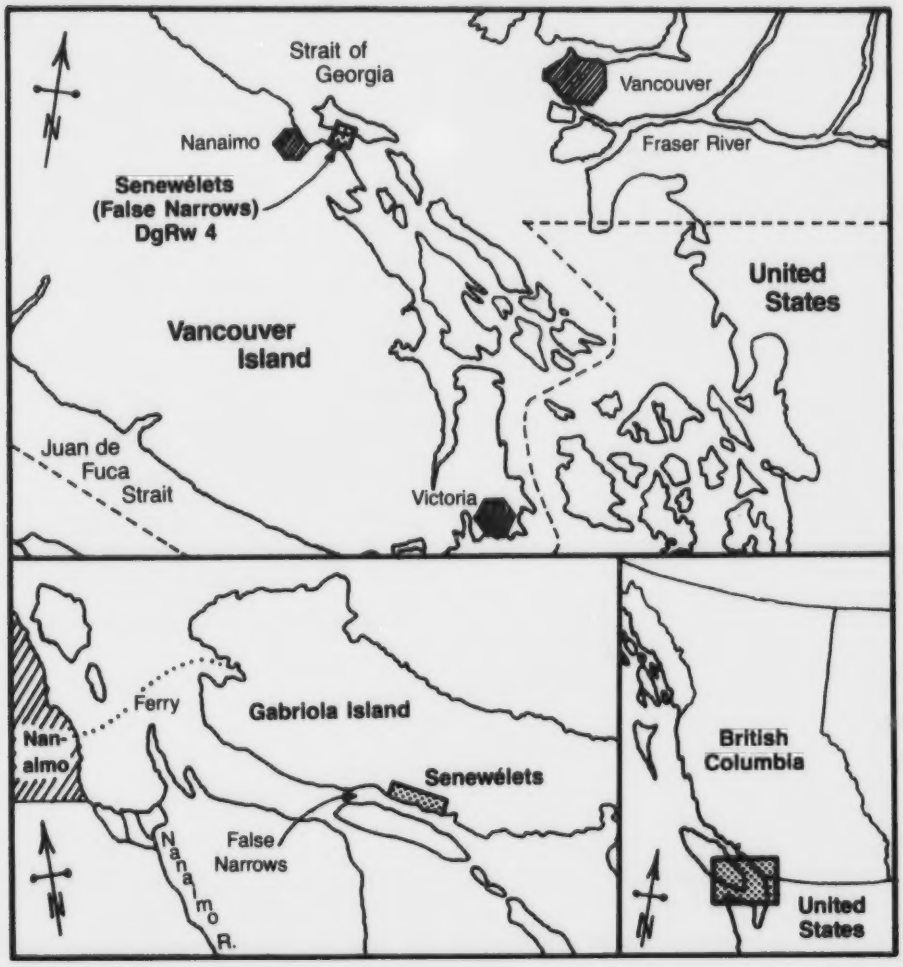

Figure 1. The Gulf of Georgia Region and the Location of Senewélets.

a complex mass of preserved food remains, archaeological features, and lost or discarded artifacts, survives as a testament to this way of life. The presence of over 200 other archaeological sites on Gabriola Island and adjacent islets, on Mudge Island, on Newcastle Island and on Vancouver Island in the vicinity of Nanaimo also attest to the area's long term importance in the economy and lifeways of coastal cultures. Who were these people, what is their history and how did they cope with this plentiful, yet as Suttles (1987: 47) describes, sometimes limiting environment? In seeking a resolution to these questions, archaeologists have amassed a considerable data base for the Gulf of Georgia region. Interpretations of these data provide a degree of consensus that is important to a current understanding of the site of Senewélets.

First, and perhaps most important, prehistorians working in the Gulf of Georgia area concur on a culture historical sequence in which Coast Salish ancestral roots are recognized by at least 5,500 years ago; a few believe proto-Salishan peoples are present in even earlier times (e.g. Carlson 1983). Despite cultural continuity, archaeological assemblages do exhibit formal variation in artifact types and technologies over time and space. Based upon this variation, regional prehistory has been segmented into a number of sequential temporal units (Figure 2). These units, referred to as "culture types" by Mitchell (1971), are named Old

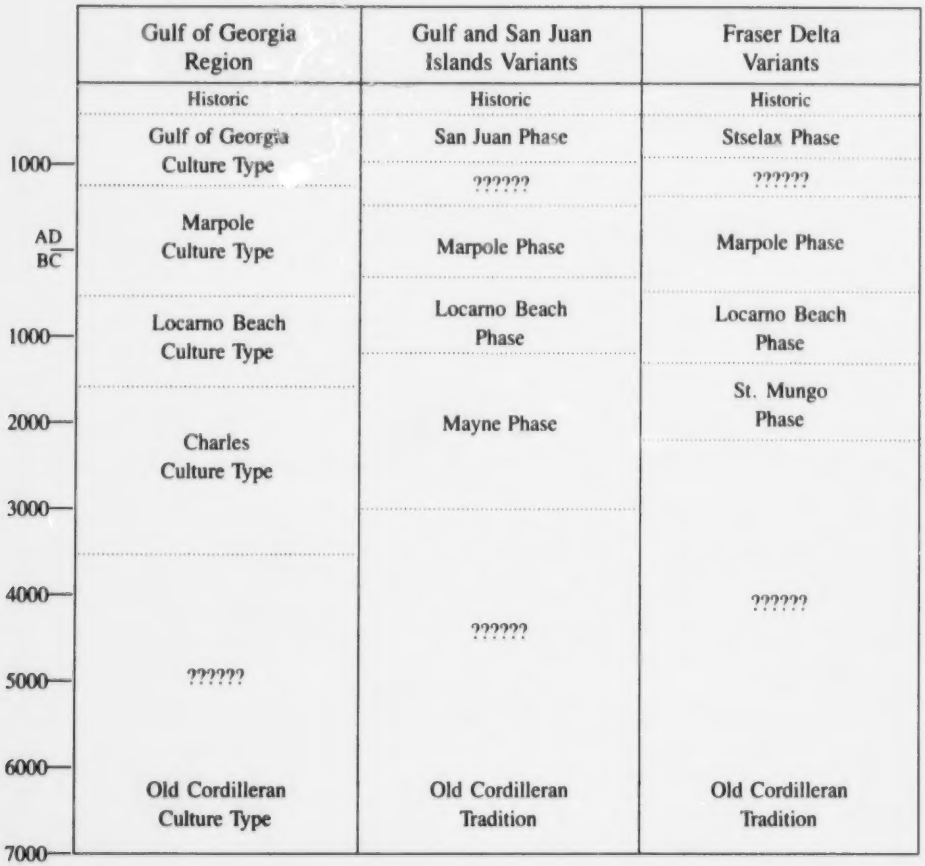

Figure 2. Culture Historical Sequences for the Gulf of Georgia Region.

Cordilleran (9,000 – 5,500 BP[1]), Charles 5,500 – 3,500 BP), Locarno Beach (3,500 – 2,500 BP), Marpole (2,500 – 1,500 BP) and Gulf of Georgia (Developed Coast Salish)(1,500 BP – European contact). As later discussed, the Marpole and Gulf of Georgia culture types are present in the False Narrows midden. This provides a time depth of no less than 2,000 years for Senewélets.

Within the past two decades, Northwest Coast archaeologists have begun to address concerns other than culture history and chronology building. Foremost among these are the issues of economy and adaptation (see Mitchell and Donald 1988). Subsistence and settlement patterns recorded by ethnographers illustrate a semisedentary yet seasonally mobile population whose movements are scheduled to exploit a range of resources as they reached climax productivity, or where they could be expeditiously acquired (Barnett 1955; Suttles 1974; also see Albright 1985). A key ingredient in this adaptive pattern is the Pacific salmon. The accumulated and stored surplus of this resource allowed for cultural complexity that is unmatched among hunting and gathering societies outside of the Northwest Coast (Fladmark 1975 among others). Zooarchaeological research by Ham (1982; also see Mitchell and Donald 1988) suggests a considerable longevity for historic patterns of resource use in the Gulf of Georgia region. This argument is important because it allows later discussion, with qualification, to examine the position of Senewélets in prehistoric Coast Salish economy.

The analysis presented in this volume was carried out in 1977 as part of my Doctoral research into the Marpole culture type (Burley 1979). The archaeological excavations at False Narrows were conducted a decade earlier by researchers other than myself. Both of these factors limit attempts to address research problems considered relevant in contemporary archaeology. Of particular note, my 1977 objectives were centred upon assemblage quantification and the delineation of cultural components. Through comparison to other sites, I attempted to define a culture history for the Marpole culture type. This goal did not require an analysis of False Narrows faunal remains nor was an indepth study of lithic debitage needed. In hindsight, this is regrettable both for present purposes and my 1977 study. These restrictions notwithstanding, the analysed assemblage incorporates important data for an understanding of the Marpole culture type. It also contributes to the pool of comparative information for researchers working within the Gulf of Georgia region (among others, False Narrows is cited in Mitchell 1971, Burley 1980, Matson, Ludowicz and Boyd 1980, Murray 1982).

In the following volume, I provide a description of site excavations, site stratigraphy, archaeological features, burials and artifacts. In line with my 1977 objectives, the focus of analysis is a determination of site components and an examination of culture historical relationships. A limited assessment of Senewélets within regional settlement pattern and historic patterns of site use are also offered. Artifact descriptions have been provided as an appendix, allowing the reader an opportunity to examine site analyses and interpretations without wading through cumbersome detail.

[1] BP is an abbreviation representing years before present.

THE FALSE NARROWS MIDDEN
LOCAL CONTEXT, HISTORY AND INVESTIGATION

Contextual information important to the interpretation of archaeological deposits at False Narrows is provided in the following section. First, the area's physical environment, including biotic and geographic setting, is briefly described. Second, ethnographic data pertaining to the use of False Narrows by the Nanaimo Coast Salish is presented. Third, a select history of archaeological research on Gabriola Island and the surrounding area is given. Finally, this section turns to a documentation of research investigations at the archaeological site of Senewélets. A more exhaustive treatment of the environment, ethnography and archaeology of the Gulf of Georgia region is provided in the works of Mitchell (1971), Ham (1982) and Patenaude (1985).

The Physical Environment of Gabriola Island

The physical environment of the False Narrows locale specifically, and Gabriola Island in general, is characteristic of many of the central islands in the Gulf of Georgia region. Gabriola Island is part of the Nanaimo lowlands subdivision of the coastal trough. It is underlain by sandstones and shales of Upper Cretaceous age. Pleistocene glaciation with concomitant erosion and deposition of glacial and glacio-fluvial materials (Holland 1964: 37) has had a major impact on land surface formation. Gabriola island has relatively low relief, generally below 150 m, and it lacks dominant streams. Prominent bays include those of Descanso, Pilot, and Clark along the northwest shoreline and Degnen and Silva on the eastern end of the island.

Sea levels in the Gulf of Georgia region are believed to have been stable for the past 5,000 years (Fladmark 1975: 148-149). Similarly, biotic regimes of the historic period, and contemporary climatic patterns, have been in place for at least 3,000 years and probably longer (Heusser 1960; Mathewes 1973; Fladmark 1975). Neither of these statements rules out intraregional fluctuations. This is particularly true for localized shifts in land — sea relationships resulting from tectonic factors (Fladmark 1975: 149). In fact, archaeological evidence suggests False Narrows was subject to a 3 m drop in sea levels during the late Marpole time period of circa 1,600 to 1,800 years ago. The overall continuity in physical environment, nevertheless, is of significance for the present study. With the site at False Narrows having a time depth of approximately 2,000 years, the contemporary setting provides data that may be used for site interpretation.

The climate of Gabriola Island and adjacent areas falls within Kerr's (1951) transitional zone of the Georgia Basin. It is characterized by wet mild winters and warm dry summers. Mean daily temperatures taken 19 km to the northwest at Departure Bay vary over the year between 3°C and 19°C (Beak Hinton 1977 as cited in Murray 1982: 60). Mean annual precipitation figures range between 89 and 102 cm (Mitchell 1971) with the vast majority falling in the October to March period.

Patterns of vegetation on Gabriola Island generally conform to that described for the Gulf Islands biotic zone defined by Munro and Cowan (1947). Climax species are garry oak (*Quercus garryana* Douglas) and arbutus (*Arbutus menziesii* Pursh) with other broad-leaf species such as red alder (*Alnus rubra* Bong.), flowering dogwood (*Cornus nuttallii* Aud.) and broad-leaf maple (*Acer macrophyllum* Pursh) present. Also present are a number of conifers including Douglas-fir (*Pseudotsuga menziesii* [Mirbel] Franco), grand fir (*Abies grandis* [Dougl.] Lindl.), Rocky Mountain juniper (*Juniperus scopulorum* Sarg.), western hemlock (*Tsuga heterophylla* Sarg.) and western red cedar (*Thuja plicata* Donn). While each of these species, to varying degrees, was used by historic Coast Salish peoples (see Turner 1975, 1979), western red cedar was clearly the most important. Cedar and cedar bark were employed for everything from house planks to clothing (see Barnett 1955; Suttles 1974).

A variety of ferns, flowering plants and shrubs occur in the southern Gulf Islands that were exploited by the Coast Salish for food, seasonings, medicines and other uses. From rice root (*Fritillaria* spp.) to an abundant range of berries, Turner (1975) provides a comprehen-

sive documentation of these species. Of those available, blue camas (*Camassia quamash* Pursh) was of particular importance. Having large glutinous bulbs that were steamed in rock lined pits, this species formed a staple within Coast Salish diet. It also was traded to groups without camas beds in their territorial range (ibid: 33). Blue camas is abundant on Gabriola Island; it also was one of the key resources contributing to the use of this island by the historic Nanaimo.

Faunal resources of the Gulf Islands have been extensively depleted since early historic times and it is difficult to assess species variety and quantity for the precontact period. Prehistoric peoples using Gabriola Island probably had access to the complete range of native fauna currently documented for the area (see Mitchell 1971; Murray 1982). These include several species of land mammal, sea mammal, water fowl, birds, fishes, mollusca and crustaceans. Pacific herring (*Clupea harengus* pallasi Valenciennes) are known to spawn in the specific vicinity of False Narrows (Beak Hinton 1977 as cited in Murray 1982: 62) and the collection of herring roe, like camas, may have been a seasonally important resource in the prehistoric use of Gabriola Island. At a nearby archaeological site (DgRx 5) on Duke Point adjacent to Nanaimo, herring dominated identifiable fish remains (Murray 1982: 354).

Of all available resources, those most crucial to understanding the Nanaimo Coast Salish use of False Narrows are shellfish. In citing a 1912 report on the clam beds of British Columbia, Rozen underscores this importance.

> Thompson (1913: 55-56) reported that the flats at the southeast end of False Narrows contained about fifty acres of clam beds. The species procured there in 1912 by forty families comprising some one hundred people were butter clams, littleneck clams and mussels. Thompson said that the Indians (in 1912) lived in their "shacks or tents set up on the Cape Mudge shore", and that this area was one of the best clam beds, with about thirty-five acres rated as "good" and valuable (Rozen 1985: 60).

Shellfish species recorded in fieldnotes from the 1967 excavation at False Narrows include horse clam (*Tresus capax* Conrad), little neck clam (*Protothaca staminea* Conrad), butter clam (*Saxidomus giganteus* Deshayes), basket cockle (*Clinocardium nuttalli* Conrad), mussel (*Mytilus edulis* Linnaeus), moon snail (*Polinices lewisi* Gould), native oyster (*Ostrea lurida* Carpenter) and whelk (*Buccinum* spp.).

History, Ethnography and the Nanaimo Coast Salish

Perhaps the earliest recorded accounts of European explorers encountering Indian peoples on or near Gabriola Island are found in the Spanish records of Narvaez and Galiano (Wagner 1933). In 1791, Narvaez sailed around the northeast end of Gabriola to which he gave the name "Casatilli". Eventually taking up anchorage on the southeast end, presumably in the vicinity of Silva Bay, he gave it the title "Gaviota". At "Gaviota", Narvaez reports the presence of an Indian settlement (ibid: 40). In the following year, Galiano crossed the Strait of Juan de Fuca, entered Porlier Pass, and proceeded northward seeking a sheltered harbour. Finding his anchorage somewhere in Nanaimo harbour, he applied the name ". . . 'Cala del Descanso' from our need of rest and our appreciation of finding it on this occasion" (ibid: 255). Over the next four days, Galiano encountered several groups of Indians and he engaged in limited trading activities. On the 17th of June, he dispatched a small exploration party to "the site of the villages of the Indians". Only the abandoned "framework of the village" remained, however (ibid: 258).

The Indians of the Narvaez and Galiano accounts were the Nanaimo Coast Salish. It was almost a century later when the first ethnographic record of these people was made by an anthropologist (Boas 1889); it was not until the 1930's that detailed anthropological fieldwork was initiated (Jenness n.d.; Barnett 1955). In the years intervening between the voyages of exploration and the 1930's, the Nanaimo were severely affected by contact with white culture. Most significant of these impacts was a dramatic decrease in population size as a consequence of European introduced disease. Estimating the Nanaimo to be 1,100 individuals in 1780, Duff (1961: 2) suggests they were reduced to 800 by 1835 and to 162 by 1915. Smallpox, present on the Northwest Coast as early as the 1790's (Gibson 1983: 63-64), was the principal

agent; other diseases took their toll. The 19th century also marked a period of intense warfare between many coastal groups and this, too, had significant impacts (Duff 1964: 43-44; Collins 1974). Boas (1889: 325) provides a historical narrative of the last engagement fought by the Nanaimo.

The Nanaimo Coast Salish are Halkomelem speakers whose exclusive territory "embraces Nanaimo Harbour as far north as Five Finger Island and as far south as Dodds Narrows" (Boas 1889: 321). Closely related to the adjacent Cowichan, these groups maintained close linguistic and kinship ties with Halkomelem groups on the lower Fraser River. Suttles describes the linguistic affiliation as follows:

> the speakers of Halkomelem are the Cowichan, Chemainus, and Nanaimo on the Island and, on the mainland, the Musqueam, Kwantlen, Katzie, Chilliwack, and others along the Lower Fraser River. The Lower Fraser tribes have also been called "Stalo," and Wilson Duff (1952) has called those from the Chilliwack to the canyon "Upper Stalo" (1987: 30).

Duff (1952: 25), citing 1827 observations of James MacMillan, records three Cowichan and one Nanaimo summer village on the lower Fraser. The Nanaimo were positioned a mile or two below Fort Langley near the confluence of the Pitt River. Close Nanaimo relations with mainland Halkomelem speakers, and the importance of the Fraser River to Nanaimo economy, are suggested in later discussions to span the entire length of occupancy for Senewélets.

Nanaimo fall and winter village locations were first documented by Boas (1889) and validated in the later works of Jenness (n.d.) and Barnett (1955). The Nanaimo are described as having five fall villages along the Nanaimo River. According to Barnett (1955: 22), each was inhabited by a "named group" which Rozen (1985: 50) interprets to be extended families. Jenness (n.d.:10) lists these villages as *Solachwan, Tewahlchin, Anuweenis, Kwalsiarwahl* and *Ishihan*. Barnett (1955: 22), providing variant transcriptions for these names, notes that four of the groups moved to Departure Bay for the onset of winter ceremonials. Only the *Salaxal (Solachwan)* remained separate with their winter village at the mouth of the Nanaimo River.

Nanaimo material culture, social organization, ritual and economy are described by Barnett (1955) and Jenness (n.d.) and summarized in Murray (1982: 72-91). As later interpretation warrants, specific aspects of this ethnography will be drawn upon. Here it is important to emphasize the importance of False Narrows and Gabriola Island in the seasonal round of the Nanaimo. In describing traditional Nanaimo settlement pattern, Jenness states:

> The Solachwan natives . . . . occupied their village untill [sic] about April, when they joined the others in moving out to False Narrows and Gabriola Island to fish for cod, grilse and other species, to hunt seals and sea lions, and to gather clams and camass; for every family had its own bed of camass on Gabriola Island (n.d.: 9).

Based on informant interviews, Rozen (1985: 59) specifically identifies the Gabriola Island side of False Narrows as the village of Senewélets. Use of this site by the Nanaimo, as reported to Jenness, continued until mid summer when the Nanaimo crossed the Strait of Georgia to fish for salmon on the Fraser River.

Archaeological Research in Historic Nanaimo Territory

For the Gulf of Georgia region, there exist several summary papers providing details of the culture historical sequence sketched earlier (Mitchell 1971; Burley 1980; Fladmark 1982). As Fladmark (1981: 12-13) states, archaeology in British Columbia expanded dramatically in the 1960's and 1970's. Central to this expansion was a growing concern by government with the principles of resource management and heritage conservation (see Abbott 1969). The archaeological investigations of False Narrows, and the recording and excavation of other sites in the general vicinity of Gabriola Island and Nanaimo, are a result.

In 1962, as part of an archaeological survey undertaken for British Columbia Provincial Parks, Abbott (1963) reported 55 "new" sites and examined a number of others that were known previously. The site at False Narrows (DgRw 4) was among the list of newly documented locations. It was not until 1966 that the extent and research potential of this

midden was realized. In that year, Mitchell (1967) selected False Narrows as one of four Gulf Islands locales to carry out test excavations. Recording site disturbances by summer cottage construction and natural erosion, his conclusions are succinct. He recommended that ". . . the board [Archaeological Sites Advisory Board] undertake a three month salvage excavation of the site" (1967: 11). Under the sponsorship of the British Columbia Provincial Museum, this project was implemented in 1967. Research objectives, fieldwork strategies and general results of the 1966 and 1967 excavation programs are discussed in the following section.

The 1967 excavation at False Narrows was among the first of a multitude of archaeological resource management based projects in British Columbia during the 1970's. Under the direction of the Archaeological Sites Advisory Board, regional inventories for archaeological sites became a priority and the Gulf Islands figured prominently in this program. Including intensive shoreline survey between 1974 and 1977 (Cassidy, Cranny and Murton 1974; Will and Cassidy 1975; Acheson and Riley 1976, 1977), these projects recorded over 1,500 previously undocumented sites. Present inventory files indicate 68 sites have been located on Gabriola Island. During the Gulf Islands' inventory, project archaeologists also assessed earlier recorded sites including the False Narrows midden. In 1974, Cassidy, Cranny and Murton (1974) estimated as much as 30 to 50 percent of False Narrows site deposits destroyed through natural erosion or contemporary land use.

Opposite the northwest end of Gabriola Island is the small peninsula of Duke Point. Plans to develop this location as an Industrial Park in the mid 1970's led to additional investigations at several archaeological sites (see Apland 1977, Murray 1982). In summing up her analysis of the Duke Point materials, Murray states:

> Conclusions to be drawn from the analysis suggested a short-term, probably seasonal, annual occupation of the site which continued over the centuries. There was little archaeological evidence on which to base hypotheses of large scale migration or technological diffusion/ innovation. Rather, the indications were of continuous *in situ* cultural development and change over a 4000 year period and probably influenced by the availability of local seasonal resources (Murray 1982: 45).

Murray's work is important for her provision of comparative data, in her extension of Nanaimo prehistory back 4,000 years and in her documentation of seasonal patterns of settlement with analogues in the ethnographic record.

A final project directly relevant to present interpretations of False Narrows has been recently conducted by Wilson (1987). Again responding to resource management concerns for site disturbances, Wilson was provided funds to assess and survey the Gabriola Island "escarpment/bluff" overlooking False Narrows. This work resulted in a detailed documentation of several intriguing and important sites including a series of petroglyph panels (also Bentley and Bentley 1981), a burial cave and a number of inland middens. Located a short distance from Senewélets and undoubtedly associated with it, these sites offer new insight into prehistoric occupation along False Narrows. This is particularly true of the inland middens which potentially represent defensive locales (Wilson 1987: 61).

The preceding, in addition to research conducted elsewhere in the Gulf of Georgia (see Fladmark 1982), are providing details of a rich and long history for the Coast Salish in general and the Halkomelem speaking Nanaimo specifically. Within the stated boundaries of historic Nanaimo territory, prehistory can be extended back to the Charles culture type (Murray 1982). From survey work, the excavations at False Narrows, and the recent research of Wilson (1987), it is apparent that Gabriola Island figures prominently.

The Archaeological Investigations at Senewélets

The site of Senewélets, as described above, was first recorded in 1962 with subsequent excavation in 1966 and 1967. Prior to 1962, the site had been cleared of vegetation and cultivated. It also had been subject to several disturbances from natural erosion and existing land uses. As the site was documented in 1966 and 1967, it extended over three benches (Figures 3 and 4). The last rose abruptly to 13 m above sea level. Erosion along the False Narrows shoreline (Figure 5) creates difficulty in estimating the original extent of occupation.

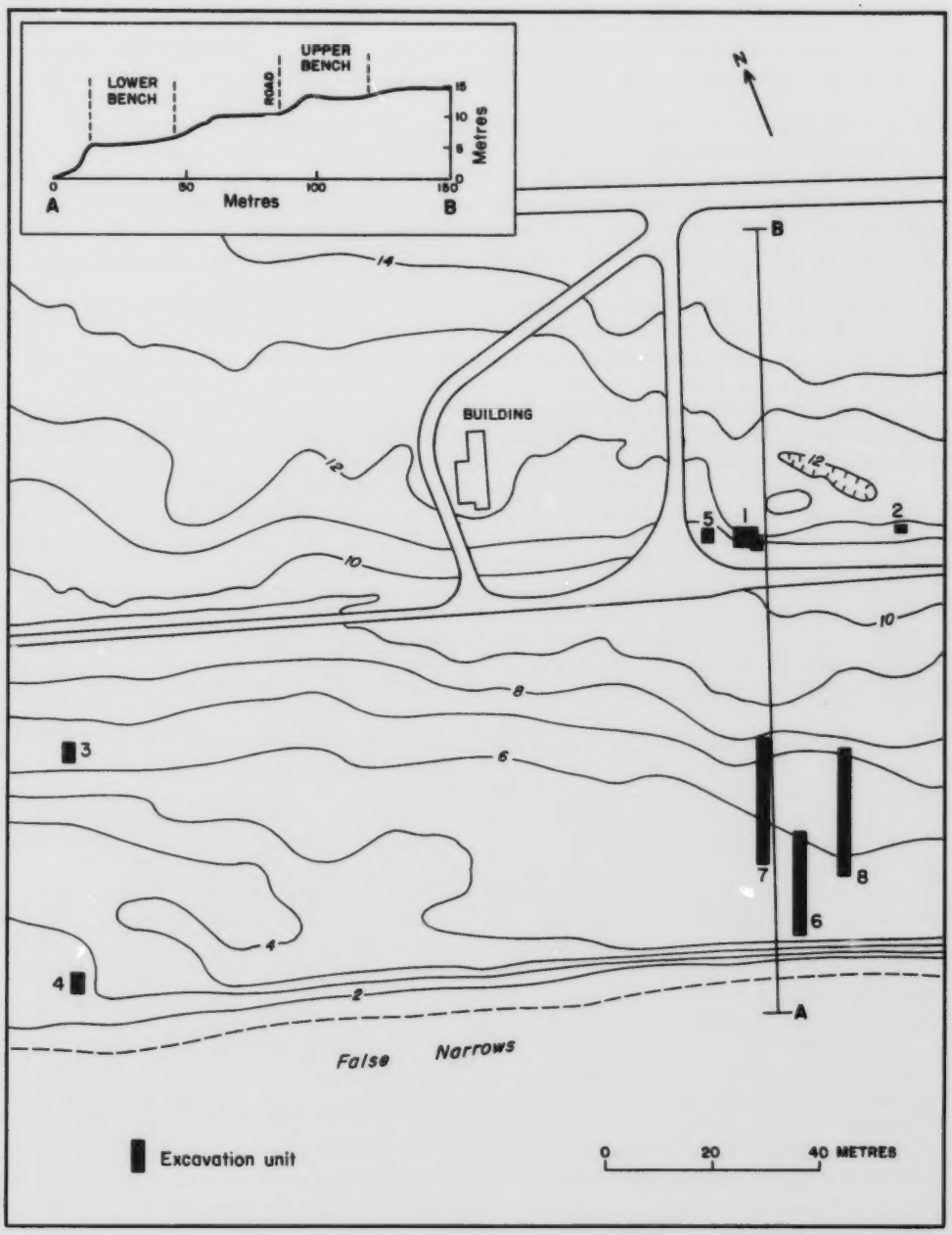

Figure 3. False Narrows Site Map and Excavation Units of 1966 and 1967.

Figure 4. False Narrows Site View 1967.

Figure 5. False Narrows Erosion 1967.

Midden deposits presently occur over a distance of 1,300 m along False Narrows with a maximum width, or distance back from the water, between 90 and 100 m. The steep bluff/escarpment surveyed in 1987 by Wilson (1987) occurs 200 m further to the northeast.

In the following discussion, a summary of research objectives and results for each year of the excavation is provided.

The Test Excavations of 1966

The 1966 archaeological project at False Narrows was, in part, a response to salvage concerns. As Mitchell describes it, a summer home development had already disturbed parts of the midden ". . . . by the construction of access roads and installation of other services" (1967: 7). Under the sponsorship of the Archaeological Site's Advisory Board, Mitchell's 1966 project was carried out by a crew of seven between July 5 and July 30.

Identifying surface materials from the beach and freshly disturbed areas as indicative of "Marpole phase" and a more recent "culture", Mitchell recognized the site's potential for a resolution of two research questions (1967: 7). First, recovered data would provide information on the relationship of Marpole and the more recent occupation(s). Secondly, the "Marpole culture" appeared particularly rich in ornamental artifacts and Mitchell hoped to gather data for a reconstruction of early art styles in the region. In 1966, Gulf of Georgia culture history was poorly defined and the excavations at False Narrows had the potential to provide new information and new interpretations.

Since only the southern end of the site was scheduled for cottage development, Mitchell's efforts at archaeological salvage were concentrated in this area. He described this part of the site as consisting of a ". . . . low bench a few feet above sea level, a second bench inland from this and raised some 15 feet above the first and behind the second bench, a long mound (Mitchell 1967: 7)". Though surface features were few, "two huge house platforms" were recorded on the second bench. Mitchell's positioned his test excavations to sample each of the site's surface components. Five pits were excavated (see Figure 3).

Excavation Units One (2 × 4 m), Two (2 × 2 m) and Five (2 × 2 m) were placed within the shell mound on the north perimeter of the cultural deposits (Figure 3). This area contained a series of sequentially deposited strata of shell, humus and ash resulting from the "dumping of refuse". However, the excavations failed to find clear criteria for a division of these strata into distinctive cultural zones. All of the 18 burials excavated in 1966 were located in Units One and Five.

Excavation Unit Three (2 × 4 m) was placed on the second bench. This unit cut into one of the two house platforms noted earlier. Cultural strata are described as being "relatively free of shell" with a matrix composition primarily of "soil rich in ash and charcoal" (ibid.). A large post mould was recorded in this unit.

The final excavation, Unit Four (2 × 4 m), was located on the lowest of the site benches. Although stratigraphy was present, cultural materials had been redeposited through "water action". Artifacts recovered from this unit were judged insignificant for cultural interpretation.

In total, Mitchell's 1966 project recovered 290 artifacts from controlled excavation and 112 others from the surface. This project also recorded 18 burials or partial burials and a small number of other features. From these data, four conclusions were offered (Mitchell 1967: 10). These were:

(1) site areas that were sampled contain the remains of a Marpole related culture;
(2) in that significant differences in the artifact collections from separated excavation units were minimal, it seems likely that all are part of a single assemblage with house structures, burials and artifacts relating to the same culture;
(3) the nature of the grave goods, and their abundance, ally the site most closely to the Beach Grove variant of the Marpole culture. An estimated age for the False Narrows materials would be A.D. 300 to 400; and
(4) while a historic Nanaimo component was not encountered, this was attributed to the limited nature of the test excavations.

Mitchell concludes his discussion of the False Narrows site by emphasizing the site's research importance and the urgency for additional fieldwork.

The Excavations of 1967

Based on Mitchell's recommendations, further excavation of the False Narrows site was conducted in 1967 by John Sendey, under the sponsorship of the British Columbia Provincial Museum. A crew of four, assisted by volunteers, excavated between May 1 and August 28. Sendey was able to take advantage of the 1966 results and he developed a research design maximizing data return while exploring additional parts of the site subject to potential disturbances.

The 1966 excavation of Unit One indicated the back slope of the midden to be rich in artifacts and burials associated with the Marpole time period. To supplement existing data, Unit One was expanded in 1967. These excavations resulted in the recovery of a much larger sample of artifacts, numerous new burials, partially excavated burials left *in situ* from the 1966 season, and a large quantity of disarticulated and scattered skeletal elements. Artifacts occurring in the lowest strata appeared to be stylistically different from those in the upper levels and Sendey, in his field notes (1967), postulates the presence of two cultural zones. Zone 1, the most recent, had an approximate depth from the surface of 40 to 50 cm. It had a matrix primarily of black soil and shell and an artifact assemblage comparable to Marpole yet including elements of a later period. Zone 2 had a more homogeneous assemblage of stylistic artifact types. This assemblage closely corresponded with diagnostic materials known for the Marpole time period.

A second 1967 pit, Unit Six, was placed on the lowest bench south of Unit One (Figure 3). This unit was originally planned as a 5×5 m block excavation. When excavation had proceeded to approximately 40 cm below surface, excavation ceased in half of the unit and the other half was extended northward into a trench 2.5 m wide by 20 m long. Aside from nine burials and scattered deposits of human skeletal material, Unit Six was most notable for temporal variation in the cultural assemblage. Items ranged from historic materials on the surface to Marpole style artifacts in the lowest strata. Sendey, again in his field notes (1967), proposed the presence of three cultural zones. These include: Upper Zone A, a series of strata assignable to the historic era; Middle Zone B, a component associated with the late precontact period; and Lower Zone C, a Marpole component related to cultural materials from the upper strata of Unit One.

As excavation of Unit Six was underway, two slit trenches (1×25 m) parallel to and flanking this unit were dug by backhoe. These trenches were used to assess the extent, depth and richness of archaeological materials along the back of the lower bench. Because they indicated a 1.5 m or more depth of stratified cultural deposits, Sendey continued his Unit Six extension to a full 20 m length. Backhoe trenches are labeled Units Seven and Eight (Figure 3). Back dirt from these units was selectively screened for cultural materials.

Although no further excavations were carried out during the 1967 season, a rock feature thought to be a burial cairn was cross sectioned with negative results. A late fall visit to the site also revealed a burial exposed by a "pot hunter" near Unit One. These remains were collected and integrated into the 1967 assemblage. Finally, throughout the summer the field crew made extensive surface collections from the beach and various other site exposures. This large assemblage of recovered artifacts, combined with a small number of donated items, completes the False Narrows assemblage.

Skeletal materials from both the 1966 and 1967 seasons have been analysed and reported upon by Gordon (1974). A detailed review of Gordon's conclusions are encompassed in a later section. Here I wish to note her ability to separate the burial population into two distinct samples on the basis of cranial deformation. These samples correlate closely with field-designated temporal placements of Marpole and later components. Gordon also found little evidence to propose separate physical or genetic populations.

A project report on the 1967 field season was not forthcoming. Based on the field notes of Sendey, and combined with 1966 results, a number of working hypotheses may be derived for later evaluation. First, there have been four cultural components proposed for the False Narrows midden. These include a characteristic Marpole component in Units One, Three and Five, a late Marpole assemblage in Units One and Six, a recent precontact component in Unit

Six, and a historic Salishan component found in Unit Six but most probably having a distribution throughout the site in the upper plough zone. It is of note that the earliest materials recorded at the site occur on the raised terrace, to the rear of the cultural deposits. Finally, with the later Marpole assemblage including traits of both Marpole and a more recent period, it seems to document a Marpole transition to the Gulf of Georgia culture type. This continuum has been supported by Gordon's analysis of skeletal materials.

THE FALSE NARROWS ARTIFACT ASSEMBLAGE

Two seasons of excavation, the backhoe trench matrix screening, the frequent recovery of materials from surface exposures, and the donation of private collections provides a large and diverse assemblage of artifacts for analysis. Excluding shell disc beads and dentalia, there exist 2,194 artifacts. Of these, 1,268 (58%) are later assigned to a cultural component The term artifact here applies to all items exhibiting human modification. At False Narrows this includes a range of specimens from a beautifully carved and polished beetle pendant to an amorphous quartz core used in stone tool production. The shell bead sample, including dentalia, consists of an additional 10,259 specimens.

Artifact descriptions are presented in Appendix A. The following section states the principles upon which artifact classification was carried out and provides a tabulation of artifact types. Raw materials from which the assemblage has been manufactured and the implications these have for an interpretation of trade are also examined.

Artifact Classification

Classification is a methodological exercise in which artifacts are grouped into defined categories based on shared attributes or some other presumed similarity. Through classification, a large collection of material can be reduced to a manageable framework for the purposes of description, interpretation and comparison. Classification may potentially take any one of several approaches depending upon the objectives set for analysis. My 1977 research objectives, as stated in the introduction, were concerned with quantification and comparison of Marpole assemblages throughout the Gulf of Georgia region.

To make the False Narrows data comparable to the several Marpole culture type components reported upon elsewhere (*see* Burley 1980: 46–49), it was necessary to use existing taxonomic principles. Here I adopted a framework applied by Mitchell (1971) in his analysis of the Montague Harbour assemblage and Matson (1976) in his descriptions of material from Glenrose Cannery. This approach first divides the assemblage into industries based on a combination of manufacturing technique and raw material. The first order taxonomy is then broken down into a series of distinctive artifact categories defined from functional and morphological traits. Finally, each category is divided into classes with overall similarity of form and/or a specific combination of shared attributes. These classes integrate functional, morphological and stylistic elements. Attribute descriptions in Appendix A are standardized using Loy and Powell's (1977) "Dictionary of Terms" for artifact analysis in British Columbia.

The assemblage taxonomy for False Narrows is outlined in Table 1. It consists of seven major industries which are divided into 32 general categories. Within the latter, 143 classes are defined. As in almost every assemblage, a large number of specimens are fragments of artifacts where a basic industry or artifact category may be interpreted, but nothing more. This results in a large number of classes that are simply labeled unidentified, miscellaneous or fragmentary.

Classification of the False Narrows material, as described above, served the research purposes for which it was intended. In retrospect, the analysis would have been enhanced through the initial separation of cultural components and a definition of classes for individual component assemblages (for example see Haggarty and Sendey 1976). By using a broad-brush approach, temporal variation within artifact classes may be masked. Murray (1982: 42) notes this in her observations that "surprisingly little variation between components" exists in the False Narrows data. This homogeneity may in part be a product of the analysis and must be admitted.

Raw Materials and Interpretations of Trade

In analysing the False Narrows assemblage, it was immediately apparent that several raw materials had originated outside of the immediate site context. In some cases, these materials had been transported over long distances to arrive at Gabriola Island. These data provide

Table 1 Assemblage Taxonomy Applied to the False Narrows Site Catalogued Artifact Collection

FLAKED STONE ARTIFACTS

Projectile Points

- triangular (39)
- excurvate (5)
- large contracting stem (9)
- small contracting stem (5)
- expanding stem (3)
- corner-notched (5)
- barbed/basal-notch (3)
- flaked point blanks (18)
- fragments (16)

Other Formed Bifaces

- large lanceolate (6)
- trianguloid/ovoid (3)
- excurvate/tear (10)
- leaf (2)
- irregular/other (11)
- flaked slate knife/blank (39)
- fragments (28)

Flake Tools

- microblades (6)
- unifacial retouch flake (104)
- bifacial retouch flake (8)
- single tip gravers (9)
- multiple tip gravers (5)

Cobble/Core Tool

- pièces esquillées (10)
- cortex spall tools (7)
- core tools (10)
- modified cobble tools (4)

Debitage/Miscellaneous

- misc. flaked stone (7)
- flaked stone cores (42)

GROUND STONE ARTIFACTS

Ground Stone Points

- triangular (9)
- rhomboidal (2)
- tear (10)
- excurvate (15)
- eared/concave base (3)
- stemmed (3)
- notched (3)
- lanceolate (6)
- fragments (25)

Ground Stone Knives

- thin small knives (6)
- thin large knives (17)
- end hafted knives (6)
- misc. ground knives (5)
- ground knife fragments (150)

Celts/Adze Blades

- single bevel adzes (7)
- double bevel celts/adzes (13)
- double taper celts/adzes (7)
- misc. celt/adze frags (15)

Abrasive Stones

- saws (10)
- handstones (6)
- bar abraders (20)
- irregular abrader/fragments (170)
- grinding slabs (23)
- other abraders (2)

Beads, Ornaments and Art Work

- ground stone beads (8)
- effigy pendants (2)
- other pendants (3)
- effigy carvings (5)

Miscellaneous Ground Stone

- stone pipe fragments (3)
- misc. ground implements (5)
- misc. ground stone debitage (16)

Table 1 Assemblage Taxonomy Applied to the False Narrows Site Catalogued Artifact Collection — *Continued*

PECKED/GROUND STONE ARTIFACTS

Hand Mauls

- nipple top maul (5)
- maul fragments (3)

Sinker Stones

- centre perforated stones (7)
- end perforated stones (3)
- misc. perforated stones (11)
- single girdle stones (6)
- T-girdled stones (3)
- large girdled stones (3)

Other Pecked/Ground Stone

- stone bowls/fragments (4)
- hammerstones (5)
- misc. pecked/ground stone (3)

BONE ARTIFACTS

Fixed Bone Points

- multiple barb points/frags (26)
- single barb points (2)
- nonbarbed fixed points/frags (12)

Composite Tool Points

- abrupt conical tip (11)
- slender tip wedge base (23)
- unipoint with cut base (14)
- bipoints (16)
- sliver points (11)

Bone Awls

- splinter awls (54)
- formed split bone awls (29)
- metapodial awls (28)
- bird bone awls (11)
- ulna awls (2)
- misc. formed awl/frags (8)

Other Puncturing/Slitting Tools

- miscellaneous ulna tools (17)
- bone knives/slitting tools (3)
- bone needles (17)

Wedges/Chisels

- bone chisels (14)
- bone wedges (3)
- chisel/wedge frags (4)
- bone edge chisel tools (5)

Ornaments and Ceremonial Items

- bird bone tubes (11)
- bone beads (2)
- bone nose ring (1)
- whale bone armlets (2)
- blanket pin (1)
- misc. perforated bone (5)
- misc. inscribed bone (3)

Miscellaneous Bone Artifacts

- bone fish hook shank (2)
- scapula triangles (4)
- worked ribs (5)
- bone rods (2)
- misc. ground bone artifacts (8)

Miscellaneous Artifact Fragments and Cut Bone

- piercing tool fragments (166)
- bone detritus (184)

Table 1 Assemblage Taxonomy Applied to the False Narrows Site Catalogued Artifact Collection — *Continued*

ANTLER ARTIFACTS

Fixed Antler Points
- unilateral multiple barb(48)
- single barb (1)
- unbarbed (2)

Antler Harpoons
- noncomposite harpoon/frags (6)
- toggling harpoon valves (20)

Antler Wedges
- tine wedges (13)
- split beam wedges (30)

Ornaments
- antler tine pendants (6)
- other antler pendants (5)
- inscribed antler tines (2)
- inscribed antler frags (9)

Miscellaneous Antler Artifacts
- antler fish hook shanks (2)
- antler haft fragments (6)
- miscellaneous antler artifacts (2)
- antler artifact fragments (36)
- antler detritus (105)

SHELL ARTIFACTS

Shell Tools
- mussel shell edge tools (19)
- shell cups (5)
- miscellaneous worked shell (9)

Ornaments/Ceremonial Items
- scallop shell rattles (45)
- shell pendants (5)
- shell gorgets (2)
- shell disc beads (6,444)
- teredo beads (23)
- dentalia (3,815)
- other shell bead (1)

MISCELLANEOUS AND HISTORIC ARTIFACTS

Tooth/Talon Artifacts
- beaver tooth tools (8)
- miscellaneous tooth pendants (5)
- eagle talons (11)

Copper
- copper artifacts (2)
- copper fragments (4)
- copper stained wood (3)

Historic Items
- glass beads (5)
- iron implements (2)
- misc. historic items (4)

insight into patterns of prehistoric trade and intraregional relationships for the occupants of Senewélets. In the following discussion, I offer a basic identification of the raw materials present at False Narrows and a summary of items that potentially were involved in a prehistoric exchange system.

The False Narrows lithic assemblage incorporates a broad variety of local and imported stone employed in the production of flaked, ground and pecked tools, and artifacts for personal adornment. Among locally available lithic materials are basalt, quartz, quartzite, chert, chalcedony, greenstone, slate, shale, sandstone, coal, syenite and andesite. Each can be potentially found in till exposures, beach gravels or exposed outcroppings. Not as easily acquired are nephrite/serpentine employed in adze manufacture and the obsidian used in the flaked stone industry. Nephrite/serpentine could have been obtained directly from the Fraser Canyon or secured through trade (Duff 1964: 83). The origins of the obsidian are considerably more varied.

Obsidian, a volcanic glass, is amenable to trace element characterization through x-ray fluorescence analysis. These characterizations allow many archaeological specimens to be traced to their original source flow. This type of analysis makes obsidian one of the more important materials for interpreting exchange patterns in prehistory (*see* Earle 1977). In the Pacific Northwest, Nelson (1975) and Carlson (1987) have used this technique to refine current understandings of coastal/interior economic relationships. Nelson has analysed several samples from the False Narrows site. Presented in Table 2, these results provide insight into patterns of prehistoric exchange.

Table 2 Source Origin Identifications for False Narrows Obsidian Specimens

Sample	Cat. No.	Source	Unit	Component	Artifact
EN 40-16	2800	Type A	Six	FN II	Detritus
EN 40-17	2822	Three Sisters	Six	FN II	Microblade
EN 40-18	1836	Garibaldi	Six	FN II	Biface
EN 40-21	2129	Type A	Six	FN III	Detritus
EN 40-22	2252	Newbury 2	Eight	Other	Microblade
EN 41-2	1756	Garibaldi	Six	FN III	Detritus
EN 41-3	2663	Garibaldi	Six	FN II	Detritus
EN 41-5	1915	Garibaldi	Six	FN II	Flake Tool
EN 41-6	2784	Garibaldi	Six	FN II	Flake Tool
EN 41-7	1528	Garibaldi	Six	FN II	Flake Tool
EN 41-8	1531	Garibaldi	Six	FN II	Biface
EN 41-23	1537	Garibaldi	Six	FN II	Core Fragment

The majority of the identified specimens come from a regional obsidian flow at Garibaldi. Garibaldi obsidian has a highly variable quality that, because of numerous inclusions and impurities, allows it to be easily identified. Situated in the Coast Range mountains, this source falls within the historic territory of the Squamish. It is conceivable that Garibaldi obsidian could have been acquired directly from its source. An equally plausible explanation for its presence at False Narrows is intraregional trade. Also present in the False Narrows assemblage are specimens derived from the Three Sisters and Newbury 2 sources of eastern Oregon. Three Sisters and Newbury 2 obsidians have high quality flaking properties. Reflecting this, both specimens analysed for trace elements had been manufactured into microblades. Oregon obsidian is found in several sites throughout the Gulf of Georgia area (Carlson 1987) and it is one of the strongest lines of evidence for participation in a long range exchange pattern for the inhabitants of Senewélets. Finally, two other obsidian specimens have a source documented as "Type A". The specific origins for this material have yet to be verified. Based on its distribution in archaeological sites, Nelson (1988 pers. comm.) suggests it may be ultimately derived from the central coast of British Columbia.

Equally important in the manufacture of tools and personal ornaments at False Narrows is a variety of faunal material including bone, antler, and teeth. Although a detailed analysis of fauna was not carried out, an examination of the tool assemblage illustrates several species of land, marine and avian fauna present. Incorporated here are coast deer (*Odocoileus hemionus columbianis* Richardson), elk (*Cervus canadensis roosevelti* Merriam), mountain goat (*Oreamnos americanus americanus*), beaver (*Castor canadensis* Kuhl), black bear (*Ursus americanus*) and canid (*Canis* sp.). With few exceptions, tools manufactured from sea mammal or avian remains were modified beyond the point of species recognition. For the sea mammals, there is a single example of a seal canine (presumably *Phoca vitulina richardi* Gray) and a small number of whale bone pieces. The latter includes a pair of armlets that are interpreted to be part of a dance costume. Several eagle talons (*Haliaeetus leucocephalus* Linnaeus) are the only avian remains identified to species.

With the exception of mountain goat, the preceding species were available within the local environment of either Gabriola Island or adjacent Vancouver Island. Mountain goat is a mainland species actively hunted in the higher altitudes of the Coast Range by historic Coast Salish groups (Barnett 1955: 92). The identified specimen is an ulna that has been manufactured into an awl. Whale bone may have been traded for or scavenged from carcasses washed ashore. Barnett (1955: 92) emphatically notes that Coast Salish peoples did not hunt whales. The relative scarcity of whale bone in Gulf of Georgia region archaeological sites supports his assertion.

Excluding beads, shell artifacts within the collection are rare in comparison to those of stone, bone or antler. This, in part, may be due to a limited range of tools and ornaments manufactured from shell. Shell artifacts also are poorly represented because of the difficulty of recovery from a shell midden matrix. Specimens made from shell, or shell thought to have been used for personal adornment in an unaltered state, incorporate the following species: purple hinged rock scallop (*Hinnites multirugosis* Gale); weathervane scallop (*Pecten caurinus* Gould); mussel (*Mytilus* spp.); horse clams (*Tresus capax* Conrad); shipworm (*Bankia setacea* Tryon) and dentalia (*Dentalium pretiosum* Sowerby). One species of mussel (*Mytilus californianus* Conrad), the purple hinged rock scallop and the weathervane scallop are not present in the immediate site environment but could be acquired from other areas within the Straits of Georgia. Weathervane scallop shell rattles are part of the ritual complex associated with the *sxwayxwey* and these are documented trade items to interior Salishan peoples (Suttles 1987: 113). The presence of dentalia illustrates a trade link with the west coast of Vancouver Island.

At False Narrows, large numbers of dentalia were frequently recovered in association with burials. While *Dentalia pretiosum* range from Alaska to central California, they are a deep water species that were accessible at but two locales along the west coast of Vancouver Island (Clark 1963: 15). Drucker (1951: 111) lists these locales as *cahqos*, a site northwest of Tachu Point in Ehetisat territory, and another in Barclay Sound near Ucluelet. Barnett (1955: 76) reports that his Coast Salish informants were not familiar with dentalia and concludes they were employed neither "for ornamentation or as a measure of value". Suttles (1974: 325) lists them as a luxury item for Straits Salish and Eells (1985: 120–121) illustrates their abundant presence among the Salish of Puget Sound. Given their presence at False Narrows and at other sites within the Gulf of Georgia region, it is probable that Barnett's informants had lost knowledge of this species.

Perhaps the only remaining material from which artifacts were manufactured in the prehistoric period that has survived in the archaeological record is copper. Two copper specimens and some fragments of wood preserved through impregnation of copper salts were recovered from the earliest deposits at the site. The specific origins for this copper have not been identified. Small copper nodules may have been collected from locations on Vancouver Island and cold hammered into form. Alternatively, this early copper might be a product of a long distance trading system with possible origins to the far north on the Copper River in Alaska (Wright 1987).

Historic items found *in situ* at False Narrows include a small number of specimens that are potentially associated with an early period of European trade. Included here are a pair of beads, an iron projectile point and a knife blade. These specimens are intriguing for they have parallels in the items traded by the Spanish at Nanaimo harbour in 1792. As translated by Wagner (1933: 256) Galiano states the Indians ". . . prized beads and Monterey shells, the pearl of which they used for ornaments, and they value pieces of rough iron more than that manufactured into knives or clasp knives, perhaps because they use them for points for arrows, harpoons and other things".

By reviewing the variety of raw materials employed in artifact manufacture at False Narrows, I postulate the following. First, the range of materials shows the site occupants to have either far ranging economic pursuits or they were involved in a system of intraregional exchange. The best evidence for this are materials such as nephrite, mountain goat bone and Garibaldi obsidian that could be acquired from mainland sources only. Secondly, the presence of Oregon obsidian, dentalia and, possibly, copper indicates participation in an exchange network that ultimately went beyond regional boundaries. In reviewing historic and ethnographic source materials on coastal trade, Mitchell and Donald (1988: 325) suggest the presence of an early and sophisticated trading system for coastal peoples. The evidence from the site of Senewélets supports their assertion (*also see* Burley 1981).

THE DELINEATION OF CULTURAL COMPONENTS

From Mitchell's (1967) preliminary report and speculation within Sendey's (1967) field notes, a minimum of four cultural components have been tentatively proposed for False Narrows. Mitchell (1967: 10), in comparing the 1966 excavated materials to other regional assemblages, also suggests the earliest component has an affiliation with a "Beach Grove variant" of the Marpole culture type. The purpose of the following chapter is to assess these interpretations, to determine the assemblage content for each component, and to provide a basis for culture historical comparison. I use the term component to represent an assemblage of culturally affiliated items that are roughly associated in time. Component definition is undertaken through the grouping of artifacts found within individual site strata or in a combination of adjacent strata.

The excavations at False Narrows were carried out using vertical provenience control of 20 cm arbitrary levels with most artifacts given three dimensional co-ordinates. Unfortunately, provenience was maintained without reference to cultural strata. Since site deposition in a shell midden is rarely uniform, and site stratigraphy is the principal means by which cultural components are defined, the excavation strategies employed at False Narrows are problematic for current purposes. In the following analysis I have tried to reconstruct the assemblage content for each stratum identified on profile drawings. This was accomplished through the physical plotting of excavated specimens against excavation unit profiles. To define cultural components, stratigraphic assemblages are subsequently grouped on the basis of shared artifact types. This approach has precedent in Gulf of Georgia region archaeological studies, having been employed by Mitchell (1971) and Kenney (1974).

Before examining component characteristics, a small number of qualifications must be made. First, to be able to carry out this analysis, it had to be assumed that physical stratigraphy, as outlined on the drawn profile, was continuous and horizontal across the excavation unit under study. Where opposite profiles exist, these do illustrate some measure of internal consistency. Unfortunately, Unit Six, the major 20 m long trench excavation, has only one north/south profile. To compound the problem further, the Unit Six profile also illustrates intrusive pits and grave interments that give a high probability for interstratigraphic assemblage mixing. Finally, it is worth noting that some inconsistencies in field recording of artifact proveniences and matrix labeling occur.

Notwithstanding the preceding, I believe the plotting of artifacts against profiles, and the grouping of materials by defined strata, verifies the original proposal of four cultural components. These are labeled, from earliest to most recent, False Narrows I to IV. Of the 1,606 specimens excavated from Units One, Two, Three and Six, 79 % (n = 1,268) have been assigned a component affiliation[1]. Assemblages for each component are provided in Table 3. Table 3 also includes a large number of specimens identified as "Other". In this category are 926 artifacts representing surface collections (n = 433), artifacts recovered from the backhoe excavations of Units Seven and Eight (n = 152) and all excavated items that were not assigned a cultural component including those from Units Two and Five. One hammerstone and 80 shell disc beads were donated to the project and they also are included as other.

Individual excavation units vary in stratigraphic context, culture-historical time depth and internal complexity. In the following discussions I provide a review of the cultural strata and component definition for each of the major excavation units.

Excavation Unit Six

Unit Six, being 20 m long, 2.5 m wide and having a depth between 1.5 and 1.75 m, has by far the largest excavated volume of midden; it also produced the largest artifact assemblage with 937 specimens excluding shell disc beads and dentalia (Table 3). At the outset of the analysis, Unit Six was felt to have the most potential for the establishment of a basic cultural sequence at the site. In reviewing this excavation first, a reference for later comparison is provided.

[1] Unless otherwise stated, assemblage counts and artifact percentages do not incorporate shell disc beads or dentalia. Predominantly found in association with burials, these specimens dominate assemblage content for Unit One and mask quantitative relationships.

Table 3 False Narrows Component Assemblages

Artifact	FN I	FN II	FN III	FN IV	Other	Total
Flaked Stone						
triangular pt*	5	5	4	2	23	39
excurvate pt*	1	0	1	0	3	5
large contract stem pt*	1	0	1	0	7	9
small contract stem pt*	1	3	0	0	1	5
expanding stem pt*	0	1	0	0	2	3
corner-notch pt*	0	0	2	1	2	5
barb/basal notch pt*	0	1	0	0	2	3
point blank*	0	4	3	3	8	18
point fragment*	0	6	2	1	7	16
lanceolate biface*	3	0	0	1	2	6
triang/ovoid biface	0	0	0	0	3	3
excur/tear biface*	0	3	0	0	7	10
leaf biface	0	0	0	0	2	2
irreg/other biface	0	0	0	0	11	11
biface fragment*	2	3	1	0	22	28
flaked knife/preform*	4	5	6	5	19	39
microblade*	2	3	0	0	1	6
unifacial retouch flake*	11	12	6	1	74	104
bifacial retouch flake	0	0	0	0	8	8
single tip graver*	2	1	0	0	6	9
multiple tip graver*	0	0	1	0	4	5
pièces esquillées*	2	5	0	0	3	10
cortex spall tool*	1	0	1	0	5	7
core tool*	1	3	0	0	6	10
modified cobble tool*	1	0	0	0	3	4
misc flaked stone	1	0	1	0	5	7
cores	7	5	4	1	25	42
Subtotal	45	60	33	15	261	414
Ground Stone						
triangular pt*	0	1	2	1	5	9
rhomboidal pt*	0	0	0	1	1	2
tear pt*	0	7	1	0	2	10
excurvate pt*	1	3	3	1	7	15
eared/concave base pt*	0	0	1	0	2	3
stem pt*	1	0	1	0	1	3
notched pt	0	0	0	0	3	3
lanceolate pt*	3	1	0	1	1	6
point fragment	1	3	6	2	13	25
thin small knife	0	0	0	0	6	6
thin large knife*	1	1	1	4	10	17
end-hafted knife*	0	1	1	2	2	6
misc knife*	0	0	3	0	2	5
knife fragment*	5	20	26	23	76	150
single bevel adze*	1	0	1	0	5	7
double bevel adze/celt*	1	2	1	1	8	13

* Designates use as a variable in computation of correlation coefficents between components.

Table 3 False Narrows Component Assemblages—*Continued*

Artifact	FN I	FN II	FN III	FN IV	Other	Total
Ground Stone						
double taper adze/celt*	2	1	1	0	3	7
adze/celt fragment*	0	3	1	0	11	15
saw*	0	2	1	0	7	10
handstone*	2	2	0	1	1	6
bar abrader*	1	2	3	3	11	20
irregular/frag abrader*	29	27	32	21	61	170
grinding slab*	2	0	5	3	13	23
other abrader*	0	1	0	0	1	2
bead*	2	6	0	0	0	8
pendant*	2	2	0	0	1	5
effigy carving*	3	2	0	0	0	5
pipe fragment*	0	0	1	0	2	3
misc ground implement	0	0	1	1	3	5
misc ground debitage	2	4	3	1	6	16
Subtotal	59	91	95	66	264	575
Pecked/Ground Stone						
nipple top maul*	1	0	1	1	2	5
maul fragment	0	0	0	0	3	3
centre perforated stone*	0	4	1	0	2	7
end perforated stone*	1	0	1	0	1	3
misc perforated stone*	2	4	1	0	4	11
single girdle stone*	0	4	0	0	2	6
T girdle stone*	0	3	0	0	0	3
large girdle stone*	0	1	0	0	2	3
stone bowl fragment*	2	0	1	0	1	4
hammerstone*	1	1	0	0	3	5
misc pecked/grnd stone	0	1	0	1	1	3
Subtotal	7	18	5	2	21	53
Bone						
multiple barb pt/frag*	3	0	7	1	15	26
single barb pt*	2	0	0	0	0	2
nonbarb pt*	1	7	1	1	2	12
comp conical tip pt*	0	1	6	0	4	11
comp wedge base pt*	2	2	7	5	7	23
comp unipoint cut base*	0	2	2	2	8	14
comp bipoint*	0	1	1	2	12	16
comp sliver pt*	0	6	3	0	2	11
splinter awl*	11	8	4	8	23	54
split bone awl*	8	5	4	0	12	29
metapodial awl*	9	11	1	1	6	28
ulna awl*	1	0	0	0	1	2
bird bone awl*	2	3	1	1	4	11
misc formed awl*	2	2	1	0	3	8
misc ulna tool*	1	2	3	3	8	17
knife/slitting tool	0	0	0	0	3	3
needle*	11	2	0	0	4	17

Table 3 False Narrows Component Assemblages—*Continued*

Artifact	FN I	FN II	FN III	FN IV	Other	Total
Bone						
chisel*	0	3	1	1	9	14
wedge	0	0	0	0	3	3
chisel/wedge fragment*	1	2	0	1	0	4
chisel edge tool*	1	2	0	0	2	5
bird bone tube*	3	6	0	0	2	11
bone bead*	0	2	0	0	0	2
nose ring	0	0	0	0	1	1
blanket pin*	1	0	0	0	0	1
armlets*	2	0	0	0	0	2
perforated pieces*	1	2	1	0	1	5
inscribed pieces*	0	0	1	0	2	3
fish hook shank*	1	1	0	0	0	2
scapula triangle*	1	0	0	2	1	4
worked rib*	1	0	0	0	4	5
bone rod*	0	1	0	1	0	2
misc bone artifacts	4	2	1	1	0	8
piercing tool fragment	22	38	28	22	56	166
bone detritus	30	52	28	18	56	184
Subtotal	121	163	101	70	251	706
Antler						
multiple barb pt*	14	13	4	1	16	48
unibarb pt*	0	1	0	0	0	1
unbarbed pt*	1	1	0	0	0	2
noncomposite harpoon*	3	1	0	0	2	6
toggling harpoon valve*	1	2	5	5	7	20
tine wedge*	0	2	5	4	2	13
beam wedge*	4	8	4	2	12	30
tine pendant*	3	3	0	0	0	6
other pendant*	0	5	0	0	0	5
inscribed elk tine*	2	0	0	0	0	2
inscribed fragment*	1	1	3	0	4	9
fish hook shank*	2	0	0	0	0	2
antler haft*	0	2	0	0	4	6
misc antler artifact	0	1	1	0	0	2
artifact fragment	8	14	4	6	4	36
antler detritus	16	27	9	9	44	105
Subtotal	55	81	35	27	95	293
Shell						
edge tool*	1	6	9	0	3	19
shell cup*	1	0	0	2	2	5
misc worked shell*	1	1	4	2	1	9
scallop shell rattle*	11	15	5	4	10	45
pendant*	2	2	0	0	1	5
gorget*	0	1	0	0	1	2
shell disc bead	6362	2	0	0	80	6444
teredo shell*	19	1	3	0	0	23
dentalia	3293	18	20	15	469	3815
other shell bead*	1	0	0	0	0	1
Subtotal	9691	46	41	23	567	10368

Table 3 False Narrows Component Assemblages—*Continued*

Artifact	FN I	FN II	FN III	FN IV	Other	Total
Miscellaneous and Historic						
beaver tooth tool*	0	0	4	0	4	8
tooth pendant*	2	2	0	1	0	5
eagle talon*	0	6	2	1	2	11
copper artifact*	2	0	0	1	3	6
copper stained wood*	3	0	0	0	0	3
glass beads*	0	0	0	2	3	5
iron implements*	0	0	0	2	0	2
misc historic items	0	0	0	0	4	4
Subtotal	7	8	6	7	16	44
Assemblage Summaries						
Flaked Stone	45	60	33	15	261	414
Ground Stone	59	91	95	66	264	575
Pecked/Ground	7	18	5	2	21	53
Bone	121	163	101	70	251	706
Antler	55	81	35	27	95	293
Shell	9691	46	41	23	567	10368
Misc/Historic	7	8	6	7	16	44
Total	9985	467	316	210	1475	12453
Component Percentages (excluding shell disc beads and dentalia)						
Flaked Stone	0.14	0.13	0.11	0.08	0.28	
Ground Stone	0.18	0.20	0.32	0.34	0.29	
Pecked/Ground	0.02	0.04	0.02	0.01	0.02	
Bone	0.37	0.36	0.34	0.36	0.27	
Antler	0.17	0.18	0.12	0.14	0.10	
Shell	0.11	0.06	0.07	0.04	0.02	
Misc/Historic	0.02	0.02	0.02	0.04	0.02	
Total	1.01	0.99	1.00	1.01	1.00	

The stratigraphy of Unit Six is complex because of pits dug into the midden for burial inclusion or other purposes (Figure 6). One of the 2.5 × 2.5 m subunits (N 7.5–N 10, Figure 6) was disturbed almost totally due to a single intrusive pit. Since such disturbances mix temporal assemblages, materials associated with these features cannot be assigned to one component or another with confidence. For Unit Six, this includes 282 artifacts.

Despite the complex stratigraphy and various forms of disturbance, several strata are continuous throughout the trench length. Cultural materials excavated from these strata also appear to be chronologically homogeneous. By comparing and combining various stratigraphic assemblages through their diagnostic artifact types, it has been possible to recognize three cultural components (Figure 7). Since, as later discussion illustrates, a fourth and earlier component is present elsewhere on the site, the three components of Unit Six are labeled False Narrows II to IV.

The upper component, False Narrows IV, is found in the plough zone and those strata immediately below it. At the south end of the trench, the subplough zone strata of False Narrows IV consist of a zone of light grey-brown sandy soil with small shell concentrations. In other areas along the trench profile, thin lenses of loose, whole, and broken shell, mixed with ash and fire cracked rock occur in these upper layers.

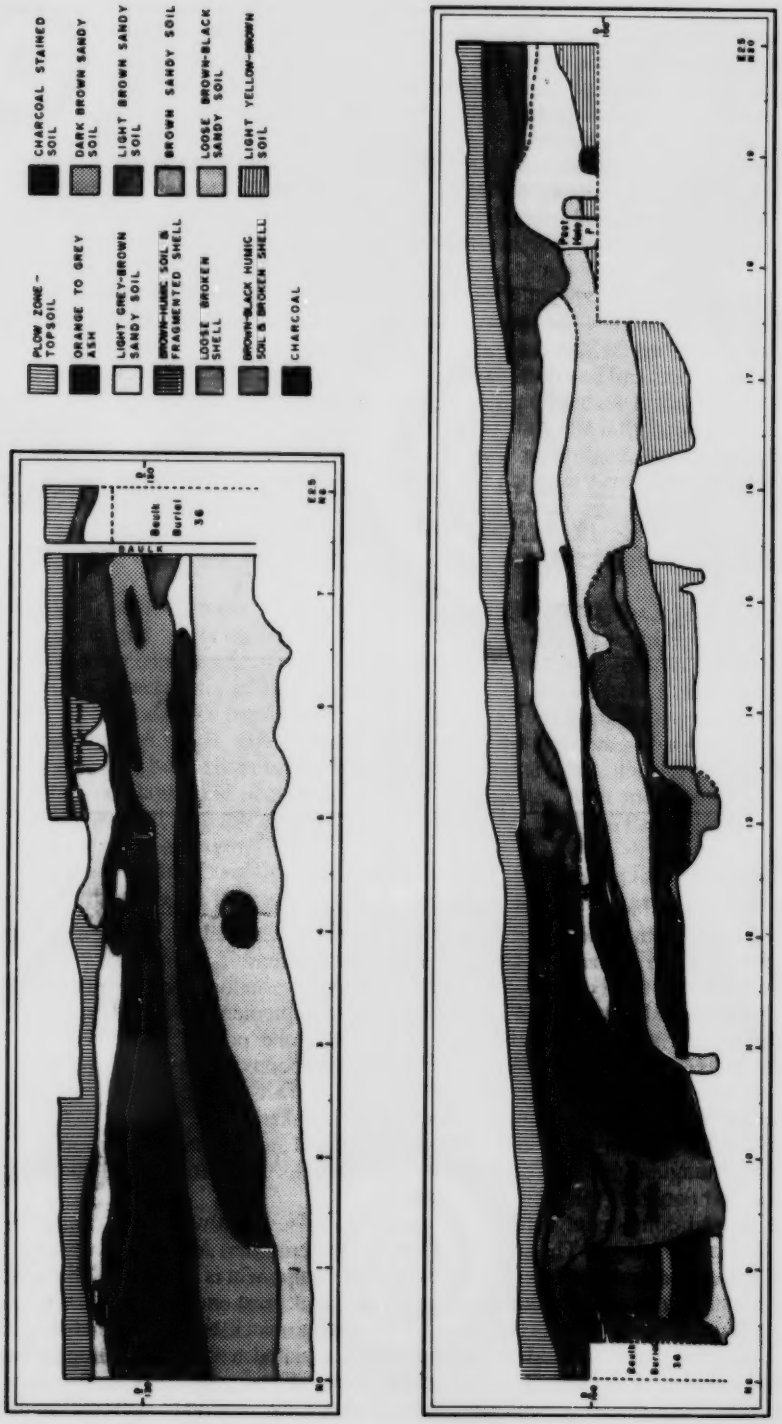

Figure 6. Unit Six Stratigraphic Profile.

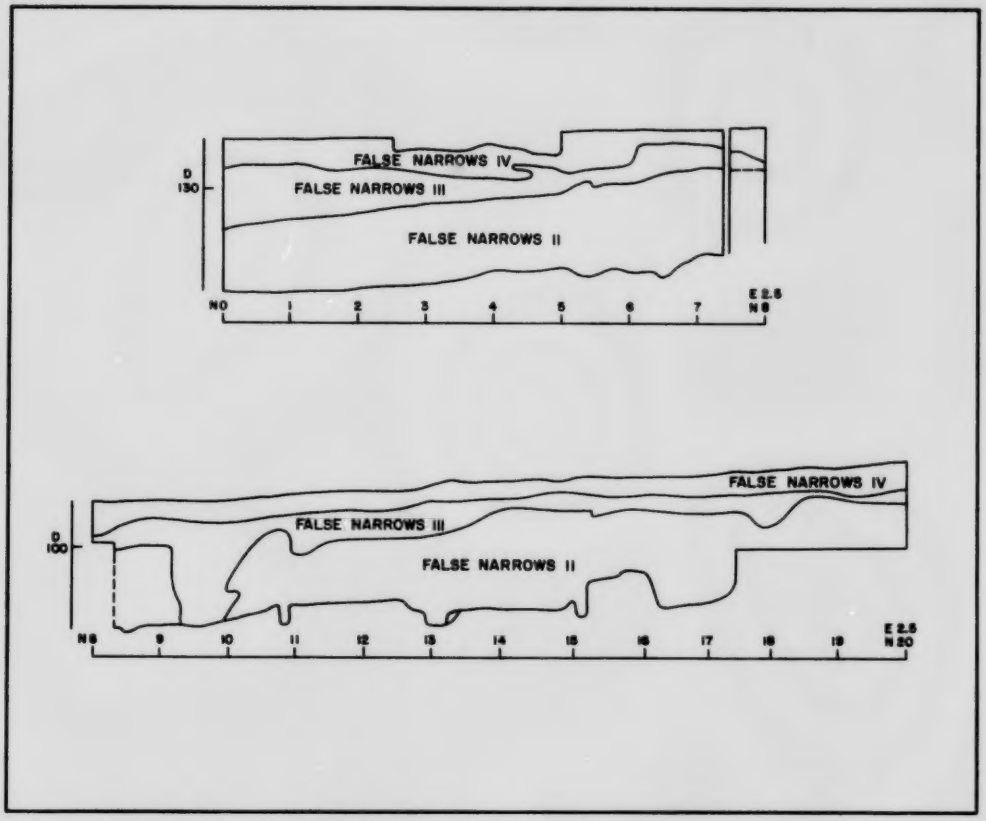

Figure 7. Unit Six Component Profile.

Artifact assemblages from the uppermost strata are different from others in Unit Six due to the presence of historic items. These artifacts are believed to represent the historic Nanaimo occupation at the site. Comparing the total assemblage for False Narrows IV to those of other strata and components (Table 3), notable variations include a decrease in the percentages of flaked stone and an increase in ground implements. On a more specific level, the presence of triangular and bitriangular ground stone points, small bone points for composite tools, and valves for composite toggling harpoons, aligns the assemblage with a late prehistoric as well as historic context. Diagnostic artifacts considered to be anomalous for this temporal association are single examples of a flaked stone corner-notched point, a unilaterally barbed antler point and a lanceolate ground stone point in addition to a pair of flaked stone triangular points. The latter, however, are documented in small numbers in late prehistoric components (Mitchell 1971: 48).

The second component defined for Unit Six, False Narrows III, is similar in many respects to that overlying it. The absence of historic materials has served as the discriminating variable. The major stratum correspondent with this component is continuous throughout the excavation unit. It also is noted that the plough zone, in at least one 3 to 4 m section, intrudes into this stratum. This stratum is composed of a brown to black-brown soil including broken shell and fire-cracked rock. Underlying, but also associated with this stratum, are bands of loose, whole and broken shell that occur in the southern and central excavation units.

The False Narrows III assemblage is characterized by a rise in the percentage of flaked stone implements when compared to False Narrows IV. However, diagnostic artifact types

differ little between the two components. Triangular points, both flaked and ground, small bone points for composite toggling harpoons, shell edge tools and rodent tooth implements are characteristic of the component. These diagnostics again indicate a recent occupation, though in this case it is prehistoric in age. As found in False Narrows IV, there are several artifact types that appear to be out of context in a late prehistoric component. With one exception, their frequencies are insignificant and they may be attributed to disturbance or error in assigning a component affiliation. The exception includes four unilaterally barbed antler points. These specimens are found most frequently in Marpole culture type assemblages. Ignoring these points, diagnostic artifact forms for False Narrows III most closely resemble those of the Gulf of Georgia culture type (*see* Mitchell 1971).

False Narrows II, the final component defined for Unit Six, incorporates assemblages from a diverse range of strata. In fact, all stratigraphic units below those of False Narrows III have been associated with the component. In the southern half of the trench, these strata consist of a major zone of dark brown sandy soil, broken shell and fire-cracked rock overlain by a number of thinner strata of charcoal, broken shell and a dark brown humic soil with scattered broken shell. A major stratum of brown-black sandy soil is the lowest unit to include cultural material. Intersected by the intrusive pit already mentioned, the stratigraphy of the northern half of the trench is noticeably different and not easily correlated with that of the southern end. In the northern end, False Narrows II associated strata consist of a brown sandy soil overlying a brown-black sandy textured matrix. Below these are more restricted zones of shell, dark brown sandy soil and a light yellow-brown soil. The latter are intrusive into site subsoils.

Diagnostic artifacts found within this complex of strata are similar, whether occurring in the lowest excavated levels or in the uppermost deposits. Yet, while there is good reason to argue for a distinct component, it is also noted that several of the diagnostics co-occur in False Narrows III. Characteristic of False Narrows II are contracting stem flaked stone points, unifacially retouched flake implements, microblades, pièces esquillées, ground stone tear-shaped points, stone beads, pendants and effigy carvings, varieties of sinker stones, non-barbed bone points, bone sliver composite points, bird bone tubes, unilaterally barbed antler points, antler pendants and scallop shell rattle fragments. Also important as a cultural diagnostic is a general increase in objects of personal adornment and the single occurrence of a unilaterally barbed harpoon.

On the basis of the above list, there is little difficulty assigning False Narrows II to the Marpole culture type time interval. Supportive of this placement is the radio carbon date of A.D. 240 ± 90 (GaK 2754) taken from a charcoal sample in undisturbed context. However, as I also note, False Narrows II has a number of artifact types in common with the Gulf of Georgia culture type component, False Narrow III. This, I suggest, documents a Marpole/late prehistoric transitional stage. In addition to unilaterally barbed antler points noted above, False Narrows II shares with False Narrows III, triangular points both of ground and flaked stone, ground stone excurvate shaped points, small bone points for composite tools, and composite toggling harpoon valves. Valves for toggling harpoons are rarely found in good association with Marpole culture type deposits (Burley 1980: 25) and it is noteworthy here that one specimen comes from the lowest stratum of Unit Six. At least part of the reported overlap between False Narrows II and III diagnostics may also be due to intercomponent mixing.

Excavation Unit One

Situated immediately north of Unit Six on the upper bench, Unit One consists of a 4 × 4 m block excavation plus partial extensions for complete burial exposure (Figure 3). Excavation was taken to a maximum depth of 2 m although unit extensions were dug only to the level of interment. Unit One included 33 of the 50 burials recorded during the two years of site excavation. This number of burials can be expected to result in large scale disturbance and mixing of the Unit One strata. However, the profile record for this unit (Figure 8) does not

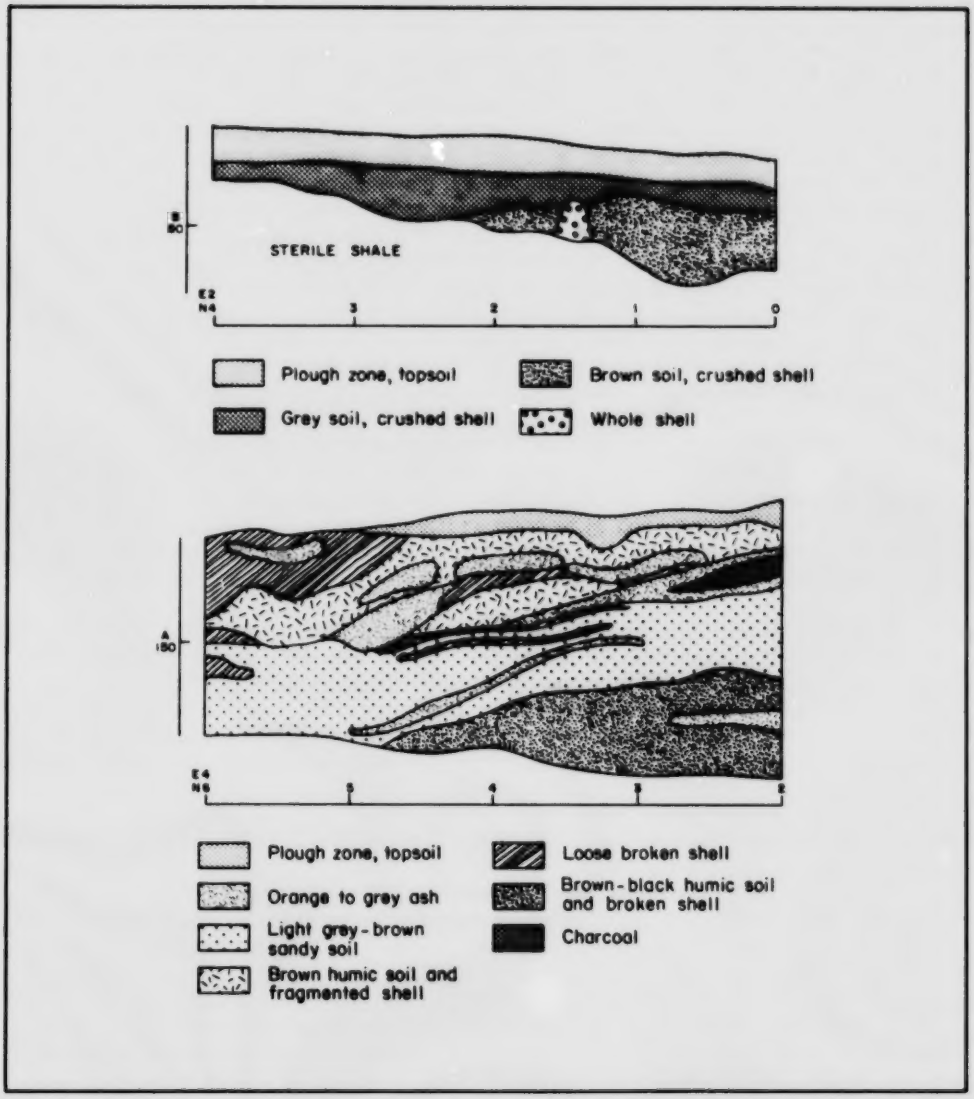

Figure 8. Stratigraphic Profiles Unit One (Lower) and Three (Upper).

document this disturbance. Since most of the interments were relatively shallow, it also appears likely that interstratigraphic mixing is confined to the upper levels.

Five major strata are discernible in Unit One. The lowest, restricted to the southern portions of the unit, is a brown-black humic soil interspersed with whole and broken shell. Overlying this is a more voluminous stratum of light, grey-brown sandy soil including lenses of mussel, ash and clam shell over which a dark brown humus with mixings of orange and grey ash can be found. The uppermost strata are characterized by a compacted layer of whole and broken shell in addition to a zone of humic topsoil and littermat.

Plotting of Unit One artifacts against profiled strata allowed for 308 specimens to be securely positioned; 44 lacked context. Despite distinct breaks in Unit One stratigraphy, diagnostic artifacts across these strata are highly similar. As a consequence, this unit is

interpreted to have only one component. Diagnostic artifact types are strongly associated with the Marpole culture type. Based upon specific artifact styles and the location of these materials on the site's upper bench, I suggest this component predates the Marpole culture type assemblage of Unit Six. Accordingly, it has been designated False Narrows I.

Artifacts characteristic of False Narrows I are a range of flaked stone projectile points, microblades, stone effigy carvings, stone bowls, single barbed points of bone and antler, bone needles, bird bone tubes, unilaterally barbed antler points and harpoons, antler tine pendants, clam shell disc beads and dentalia. In addition, there is a noticeable lack of small bone composite points. Artifact types that seem out of place with the Marpole affiliation are unilaterally barbed bone points and a single valve for a composite toggling harpoon. The latter was recovered from the lowest stratum of the unit and there is little doubt about it coming from an undisturbed context.

Excavation Units Two and Three

While Unit Two is situated on the extreme eastern end of the site and Unit Three occurs on the western periphery, both have comparable assemblages and both have been assigned to the False Narrows I component. Each of the units is 2×2 m in size and was excavated in the 1966 field season.

Excavation Unit Two includes an upper, partially disturbed, stratum of brown-grey soil overlying a thick zone of whole and crushed shell. In turn, this caps a mixed stratum of scattered shell and brown soil from which a majority of the cultural material was collected. Finally, the lowest stratum consists of crushed and whole shell interspersed with brown soil. Culturally sterile subsoil occurred 1.3 m below the surface.

The small artifact collection from Unit Two includes five fixed antler points, a large facetted ground slate point fragment, a triangular flaked stone point, a perforated stone, a deer metapodial awl or pin and several unifacially retouched flake tools. None of these artifact types appear out of context with the False Narrows I affiliation.

Unit Three was originally placed to test a possible house platform. This unit was shallow and only two major strata were present (Figure 8). The upper, including a 20 cm plough zone, consists of a grey matrix with crushed shell and scattered ash. Below this is a stratum of brown soil and crushed shell. Broken shale underlies the cultural deposits.

With the possible exception of a stemmed ground point from the upper stratum, all diagnostic materials fit into a False Narrows I Marpole context. These include microblades, a flaked stone triangular point, an excurvate ground stone point, a perforated stone, a nipple top hand maul, disc beads and dentalia. As later indicated, the presence of a post hole feature associated with the house platform is important for site interpretation.

Other Excavation Units

For several reasons, assemblages from units other than One, Two, Three or Six have not been given component affiliations. Excavation Unit Four (2×2 m) consists totally of water redeposited material. Excavation Unit Five was situated on an erosional face so that an exposed burial could be removed. Given potential redeposition through erosional slumping, the stratigraphic placement of recovered items seemed suspect. Finally, Units Seven and Eight are *circa* 1×25 m back-hoe swaths with the tailings from each being partially screened. From this screening 72 artifacts were recovered from Unit Seven and an additional 80 were collected from Unit Eight. None of these specimens were given vertical or horizontal provenience. Unit Seven backhoe excavations also exposed the remains of three burials.

The artifacts recovered from each of these disturbed units, as well as those collected from the surface, include a range of diagnostic items. None are characteristic of a cultural occupation predating the Marpole culture type of False Narrows I.

Component Correlation and Summary

In the preceding analysis, I have argued the site of Senewélets to have four cultural components. The most recent, False Narrows IV, is identified as a historic Coast Salish

Nanaimo occupation. Reference to this occupation can be found in both historic and anthropological sources. False Narrows IV has been found principally within the plough zone and there is little doubt that it is mixed with late prehistoric material. In fact, if one eliminates the historic items from False Narrows IV, diagnostic artifacts are similar to those described for False Narrows III, the late prehistoric Gulf of Georgia culture type component. Having noted minor exceptions, the similarity of False Narrows III and IV components illustrates a continuity of technological tradition and population settlement from the prehistoric to historic periods at the site.

The relationship of False Narrows III to False Narrows II similarly shows continuity in technological tradition. Although some of this similarity may be due to intercomponent mixing, the stratigraphic position of diagnostic artifact types such as small bone points for composite tools and valves for two piece toggling harpoons suggests otherwise. Combined with diagnostics of the Marpole culture type, these items indicate an assemblage transitional between Marpole and Gulf of Georgia culture types. The radiocarbon date of AD 240 ± 90 (GaK 2754) also places this component near the end of the Marpole period (Burley 1980: 34–35).

The earliest cultural component at the site has been labeled False Narrows I. On the basis of diagnostic artifact types, it has been closely aligned with the Marpole culture type. The relative absence of late prehistoric artifact forms, as found in False Narrows II, and its position on the site's upper terrace, indicates an earlier temporal placement within Marpole. False Narrows I is interpreted to fall in a mid-Marpole time range between *circa* 100 B.C. and A.D. 100. Again there is no reason to question cultural continuity between it and the succeeding component.

Within the midden, the earliest component, False Narrows I, is restricted to the upper elevated terraces (Units One, Two and Three) while False Narrows II, III and IV occur in Unit Six on the lower bench. This vertical separation has been used by Mitchell (1971: 67) as evidence for widespread sea-level change in the Gulf of Georgia region (after Fairbridge 1960). As Mitchell (*ibid.*) notes ". . . a 10-foot rise in the sea-level at False Narrows would have covered the broad bench that at present parallels the shore and places the long ridge of Marpole culture deposits at the edge of a beach." Rather than a region-wide shift in land/sea relationships, transitions such as this are suggested by Fladmark (1975: 149) to result from localized tectonic factors. If Fladmark is right, then Gabriola Island would have been subjected to an uplift of 3 m by approximately 1,800 years ago. With the lower bench exposed and forming the new shoreline, site occupation subsequently shifted from the higher elevation. A large midden close to, but further inland and on a higher elevation than False Narrows, (DgRw 209) has recently been recorded by Wilson (1987: 53). This site, unfortunately, remains undated.

The delineation of cultural components, to this point, has been carried out on a more or less subjective basis. Diagnostic artifact types are assumed to have temporal sensitivity. When found in various combinations, these allow for relative placement within the regional archaeological sequence. To test the integrity of the hypothesized relationships at the site, product moment correlation coefficients (r) were computed between components using the MacIntosh Statview 512 program. The coefficient is a parametric statistic that requires an assumption of representativeness for the sample. It measures component relationships on a scale of $+1$ to -1 with the latter being a perfect negative correlation. Coefficients were computed using 113 artifact classes. Classes were omitted if the specimens were thought to have little diagnostic value (e.g., bone debitage). Artifact classes and raw frequencies employed in the exercise are identified in Table 3.

The correlation coefficient matrix presented as Table 4 nicely parallels the proposed temporal and cultural relationships between components at the site. The mid-Marpole occupation of False Narrows I has its strongest ties ($r = 0.679$), as we might expect, with the late Marpole component of False Narrows II, and its weakest correlation ($r = 0.0.501$) with the most recent component, False Narrows IV. False Narrows IV also has an inverse relationship with correlation coefficients becoming weaker through time. The correlation coefficients for False Narrows II and III are perhaps the most revealing for present interpreta-

tion. These illustrate not only close ties with each other (0.744) but also with adjacent components. This supports previous arguments for technological continuity.

To conclude, it is noteworthy to emphasize the quantitative verification of the subjective approach used in differentiating components. The quantitative analysis measured the correlation between unit assemblages. With correlation coefficients mirroring proposed temporal relationships, the temporal sensitivity of at least a portion of the collection's diagnostics must be accepted.

Table 4 Matrix of Correlation Coefficients Between False Narrows Component Assemblages

	FALSE Narrows I	FALSE Narrows II	FALSE Narrows III	FALSE Narrows IV
False Narrows I	1.000	0.679	0.581	0.501
False Narrows II	0.679	1.000	0.744	0.699
False Narrows III	0.581	0.744	1.000	0.899
False Narrows IV	0.501	0.699	0.899	1.000

CULTURE HISTORICAL COMPARISONS

The archaeological sequence defined for the False Narrows site supports the currently held model of culture history for the Gulf of Georgia region. This culture historical model proposes a continuity from the earliest Marpole occupation up to the historic era (Mitchell 1971; Burley 1980). The four False Narrows components have been associated with a classic" or middle" Marpole culture type occupation, a Marpole transitional occupation, a Gulf of Georgia culture type occupation and a historic Nanaimo occupation. In the following discussion, I examine culture historical relationships for each of the components. The implications of False Narrows for contemporary interpretations of regional prehistory are also addressed.

False Narrows I and II

False Narrows I and II are associated with the Marpole culture type as it has been defined from archaeological assemblages within the Gulf of Georgia region (Borden 1970; Mitchell 1971; Burley 1980). This culture type has an approximate date range of 400 B.C. to A.D. 400. Marpole sites and artifact assemblages demonstrate a cultural system characteristic of the complex Northwest Coast pattern of the ethnographic period and there is little doubt of population continuity between Marpole and Coast Salish peoples. Defined characteristics for the Marpole culture type include an emphasis on wealth and social ranking, a high level of artistic achievement, the use of large multifamilied plank houses, a considerable degree of regional interaction and mobility and an economy focusing upon the five species of Pacific salmon (Burley 1980: 54–69). A detailed list of diagnostic artifact forms for the Marpole culture type is provided elsewhere (Burley 1980: 19–30). Marpole is particularly noted for the presence of sculpture in stone, an emphasis upon artifacts for personal adornment, a frequent use of antler for fixed point manufacture and the use of a noncomposite, unilaterally barbed, antler harpoon technology. A minimum of thirty sites with a known Marpole association have been documented within the Gulf of Georgia region. These are spread throughout the Gulf Islands, San Juan Islands and along the Fraser River (*see* Figure 9).

False Narrows I and II assemblages previously have been used as comparative materials in archaeological site reports or integrated within regional syntheses (among others Mitchell 1971; Burley 1980; Matson, Ludowicz and Boyd 1980). Because of the rich burial assemblage and associated grave offerings, regional prehistorians have viewed these components as different from most other Marpole occupations. In their "anomalous" qualities, False Narrows I and II share similarities with the Marpole component(s) at the Fraser River mouth site of Beach Grove (Abbott 1961; Smith 1963; Matson, Ludowicz and Boyd 1980). Both are characterized by abundant occurrences of dentalia, clam shell disc beads, shell gorgets and rattles, shell edge tools, a specific antler tear-drop pendant form, pecked stone vessels and a similar range of flaked and ground points. That each of these artifacts could be recovered in any Marpole culture type component cannot be disputed. Their occurrence as a particular assemblage with an emphasis on the wide range of items for personal adornment seems more characteristic of Beach Grove and False Narrows. Beach Grove, like False Narrows, also is distinguished by a large number of burials with grave inclusions. False Narrows and Beach Grove Marpole components have been grouped to form the "Beach Grove variant" of the Marpole culture type (Mitchell 1971: 56).

In a 1980 synthesis of Marpole culture type data, I undertook a quantitative analysis of 18 Marpole components using 51 artifact classes (Burley 1980: 46-53). Manhattan City Block metric distance coefficients were calculated between each component and the results were scaled on four dimensions. One of the dimensions revealed the close relationship between False Narrows I and II and Beach Grove. I have interpreted this dimension to represent the Beach Grove variant of the Marpole culture type. While not strongly associated, sites at English Bluffs, Marpole, Point Grey and Montague Harbour also showed affinities. With the exception of Montague Harbour, each of these sites occurs near the mouth of the Fraser River.

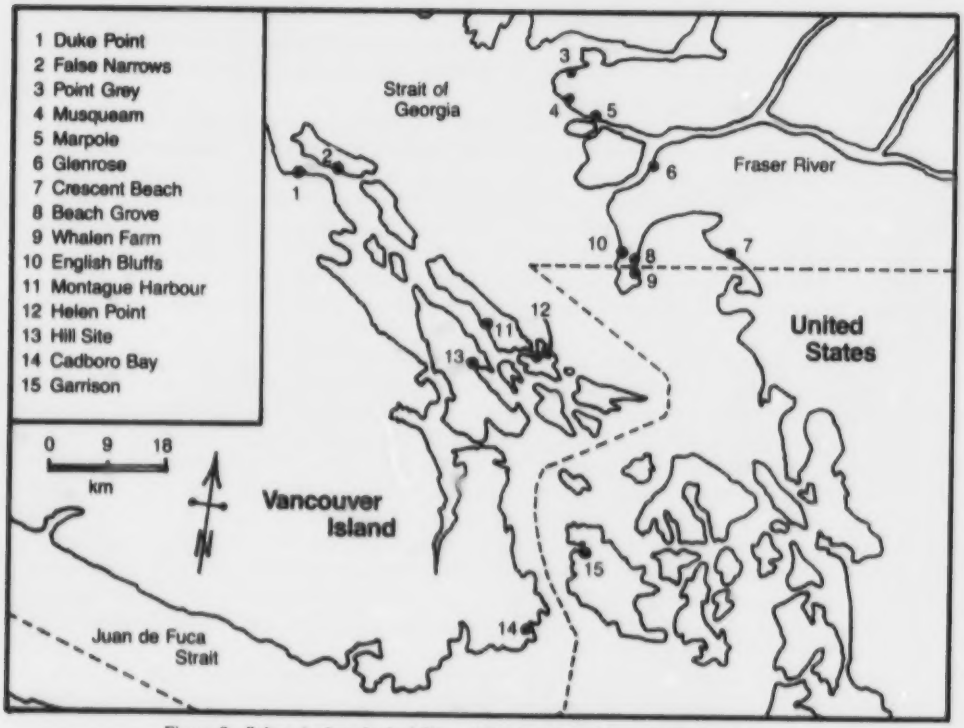

Figure 9. Select Archaeological Sites within the Gulf of Georgia Region with Culture Historical Relationships to False Narrows.

Matson, Ludowicz and Boyd (1980), in their report on the 1980 excavations at Beach Grove, undertook a similar form of analysis. They, however, split the Beach Grove site assemblage into three units based upon site area and/or year of excavation. Interpreting the first two dimensions of the scaled results to be associated with temporal variation, they applied Ward's cluster analysis to these dimensions (Matson, Ludowicz and Boyd 1980: 99–114). In the end, three clusters were defined. Each cluster, it was argued, represents a temporal variant of the Marpole culture type. These include an early Old Musqueam variant, a middle Beach Grove variant and a middle to late Garrison or False Narrows variant. The Garrison or False Narrows variant includes assemblages from Montague Harbour, False Narrows I and II, Beach Grove (1957, 1961 and 1979 excavations), Deep Bay, English Bluff and Point Grey. The Beach Grove variant, on the other hand, consists of excavated assemblages from the 1962 and 1980 field seasons at Beach Grove in addition to components from Helen Point, the Hill site, Whalen Farm and the Marpole site.

While admitting that the assemblage differences between the late Marpole Garrison/False Narrows variant and the middle Marpole Beach Grove variant are slight, Matson, Ludowicz and Boyd (1980: 109–110) note several points of departure. Among these are a greater abundance of flaked stone in the middle period and increased frequencies of pecked stone and bone use in the late variant. Most of the traits found in late Marpole that differentiate it from mid-Marpole are also characteristic of the more recent Gulf of Georgia culture type. The analyses of Matson, Ludowicz and Boyd, therefore, do illustrate a transitional state.

I earlier noted Mitchell's (1971) association of False Narrows with Beach Grove and the strength of this association has been revealed in the quantitative analysis of Matson, Ludowicz and Boyd (1980) and in my own work (1980). A wide range of dates for the Beach Grove Marpole occupation have now been obtained from several different site areas. As

Matson, Ludowicz and Boyd (1980: 99) describe them, ". . . six of the ten dates are within one sigma of 300 to 600 A.D. which suggest that this is the time of most intense occupation." The date of A.D. 240 ± 90 (GaK 2754) for False Narrows II, indicates contemporaneity with the most "intense occupation" at Beach Grove.

By comparing False Narrows I and II artifact styles to those from other Marpole sites in the Gulf of Georgia region, additional relationships may be suggested. Most notable in terms of specific similarities are specimens from the Marpole components at Cadboro Bay on the southern end of Vancouver Island and the Marpole type site. The full analysis of the Cadboro Bay assemblage has yet to be undertaken. However, in her study of barbed bone and antler point styles from the Gulf of Georgia region, McMurdo (1972) found Cadboro Bay points to be typologically identical to specimens from False Narrows. Abbott's (1961: 103) affiliation of the Cadboro Bay Marpole component with the Beach Grove site is taken as additional support.

The Marpole site is the type site from which Borden (1968, 1970) defined the Marpole phase. Being such, one must expect some degree of similarity between it and all other sites assigned to this culture historical unit. A review of the only analysed collection from the Marpole site (Burley 1979), illustrates a strong relationship with False Narrows. Aside from similarities in fixed antler and bone points, Marpole and False Narrows assemblages share flaked lanceolate bifaces, basal-notched to barbed points, nipple top mauls, zoomorphic and anthropomorphic carvings and pendants, perforated stones, microblades and a general range of pendants, beads and other items for personal adornment. On a specific level, a False Narrows unilaterally barbed antler harpoon with a neck spool and one with incised bilateral line-guards, have extremely close counterparts at Marpole (McMurdo 1972). As well, the distinctive antler tear-drop pendant form present at Beach Grove and False Narrows, is also found at Marpole (*see* Appendix A).

Radiocarbon dates from the Marpole site, with one exception, fall between 390 B.C. ± 60 (S-17c) and A.D. 440 ± 90 (HAR 2183)(Burley 1980: 32). The majority, however, cluster around the period 100 B.C. to A.D. 150. On the basis of diagnostic similarities, I expect the latter interval also to apply to False Narrows I. This interpretation is in line with the A.D. 240 ± 90 date obtained for False Narrows II.

While False Narrows II is designated as a transitional late Marpole component, there remains every possibility that it could represent a mixed assemblage. Considering the disturbance levels at this site, and the potential sources of error through excavation, recording, and analyses, the potential for Marpole related materials to be integrated with a later assemblage must be recognized. On the other hand, since time is a continuous variable and the Gulf of Georgia and Marpole culture types are defined by exclusive traits, should one not expect a period of transition where elements of each are included? In the past, this transitional stage has gone unrecognized through the search for a distinctive intermediate component (for example Borden 1968). The analyses of Matson, Ludowicz and Boyd (1980) and their definition of a late Marpole variant, support the interpretation of transitional assemblages at both False Narrows and Beach Grove.

False Narrows III and IV

The False Narrows III and IV components are affiliated with the Gulf of Georgia culture type and Nanaimo Coast Salish respectively. Historic artifacts aside, there are few differences between these components in either diagnostic specimens or general assemblage content. For comparative purposes, they are discussed together.

The Gulf of Georgia culture type, as it has been defined by Mitchell (1971: 47–51), is Developed Coast Salish. It incorporates the late prehistoric Stselax (Borden 1970), Esilao (Borden 1968) and San Juan (Carlson 1960) phases. Associated components are spread throughout the Coast Salish linguistic province up to and including the western end of the Fraser Canyon. With an approximate age between A.D. 1200 and the historic period, coastal prehistorians feel confident in their use of the direct historic approach and ethnographic analogy for interpreting Gulf of Georgia culture type data (for example Mitchell 1971:

48–51, Ham 1982). Virtually all societal characteristics defined for the Coast Salish are assumed present by the beginnings of the Gulf of Georgia culture type.

The Gulf of Georgia culture type is differentiated from Marpole on the basis of technological and stylistic change within its artifact assemblage. The most significant differences occur in the presence of composite toggling harpoons and numerous other composite tools represented by an abundant sample of small bone points. A decrease in the frequency of flaked stone tools, an increase in the use of ground stone items, stylistic change in flaked stone points, ground slate points, barbed bone points and pecked hand mauls are additional examples.

The False Narrows III and IV assemblages are characterized by flaked stone triangular points, ground stone triangular and excurvate points, barbed bone points, a profusion of small bone points for composite tools and valves for composite toggling harpoons. Based upon assemblage content, these components have their closest analogues with the Duke Point site DgRx 5 Component III (Murray 1982) and the Galiano Island, Montague Harbour III component (Mitchell 1971). Of particular note is the common occurrence of flaked stone triangular points; these seem to be specific to the late prehistoric periods at False Narrows, Duke Point (DgRx 5) and Montague Harbour. The radiocarbon dates associated with the Gulf of Georgia culture type components at Montague Harbour could equally apply to False Narrows III. These are AD 1160 ± 30 (GSC 423) and AD 1220 ± 30 (GSC 436) (Mitchell 1971: 221).

The historic materials found in association with False Narrows IV indicate a more recent occupation. Based upon Galiano's contact with the Nanaimo described earlier, I would date this component to A.D 1792 or shortly thereafter. From Galiano's descriptions, it is interesting to note that the Nanaimo, while not ignorant of Europeans or their trade goods, had yet to integrate these into dress or weaponry (Wagner 1933: 256).

A large number of Gulf of Georgia culture type components can be listed for comparative purposes to False Narrows III and IV. Since all of these sites are considered part of the same cultural tradition, this listing would be of little value for culture historical interpretation. It is noteworthy, however, that major assemblage variations do exist within the region as indicated in the early definition of Stselax, San Juan and Esilao phases (Borden 1968; Carlson 1960). This variation, in part, is seen to be a reflection of settlement pattern and seasonal technologies, as well as differing spheres of influence or diffusion. For example, the flaked stone point styles found at False Narrows and Montague Harbour are considerably different from the small notched varieties of the mainland Stselax phase (Borden 1970; Charlton 1977, Patenaude 1985). The latter varieties, being similar to types from the interior, illustrate substantial interaction along the Fraser River. Yet, as Mitchell (1971) has shown, documented similarities between late prehistoric assemblages far outweigh the differences within the Gulf of Georgia region.

Summary

The preceding analyses and discussion have provided few new and startling insights into the cultural sequence at False Narrows and the Gulf of Georgia region. Rather, the value of this discussion lies in a strengthening of previously cited interpretations and hypotheses. With four components spanning a middle Marpole to historic occupation, abrupt changes in assemblage content for contiguous components at False Narrows cannot be found. Changes in stylistic artifact types are gradual, though present. The dominant transition is one of technology; the late prehistoric period is characterized by a substantial increase in the frequencies of composite tools.

False Narrows I has the most abundant artifact assemblage if shell disc beads and dentalia are added in. It is closely related to the Beach Grove site and with it forms a variant of the Marpole culture type. False Narrows I is particularly notable for the abundance of personal items and other ornamentation. False Narrows II is a transitional component and, were it not for stratigraphic context, might be interpreted as a mixed assemblage. It, too, is related closely to Beach Grove. The final components, False Narrows III and IV, have close

associations with other late sites on Vancouver Island, the Gulf Islands and the San Juan Islands. They are confidently identified as belonging to the Gulf of Georgia culture type. I also believe they specifically represent the remains of the Halkomelem speaking Nanaimo at False Narrows.

SETTLEMENT PATTERN INTERPRETATION

The concept of settlement pattern, as employed by archaeologists, refers to the manner in which human settlement is distributed on the landscape or how it has been structured within individual communities (Chang 1968). Settlement pattern is determined by a combination of interacting variables including the physical environment, technology, social organization and ideology. In the following section, I examine settlement pattern data for the site at False Narrows in two ways. First intrasite features recorded during the excavations of 1966 and 1967 are described and discussed. Secondly, through the use of historic and anthropologically recorded information for the Nanaimo Coast Salish, and their use of Gabriola Island, I examine the site of Senewélets within a regional settlement pattern framework.

Intra-site Settlement Features

The False Narrows midden, as earlier described, is a complex mass of preserved food remains, archaeological features, and lost or discarded artifacts. As Ham (1982) explicitly argues, the formation of Northwest Coast middens is the result of a dynamic series of processes that mask former associations and limit interpretations of intra-site settlement pattern. These limitations are readily apparent at False Narrows. For the purposes of description, features at the site have been classified into five types. Details for each feature are provided in Table 5.

The dominant feature type (n = 14) recorded during site excavation is referred to as an ash concentration. A majority of the ash concentrations were identified in field notes as "hearths". Having closely examined the field descriptions, I believe several are redeposited ash lenses. In addition to having ash, a number have associated concentrations of fire-broken rock, charcoal and burned shell. Only one ash concentration (No. 54a, Figure 10) has an associated post hole possibly indicating a former smoking rack. Concentrated ash features occur in all four components with the greatest numbers in False Narrows I (n = 5) and IV (n = 4).

Nine concentrations of fire-broken rock and/or large boulders have been labeled rock clusters. Most are interpreted as refuse from an activity undertaken elsewhere on site. However, one is potentially identified as an *in situ* hearth and another is similar in form to a later described burial feature. The hearth (No. 51), in addition to fire-broken rock, had limited quantities of charcoal and ash, as well as several associated artifacts including a stone bowl fragment. The burial-like rock feature (No. 28) consists of an igneous boulder adjacent to several vertical sandstone slab sections enclosed within a shallow pit. Despite its structural similarity to a stone slab burial, skeletal remains were not present. The rock cluster feature class is found in all four components. Four are associated with False Narrows I, one with False Narrows II and two each with False Narrows III and IV.

A third feature type associated with on-site use of fire consists of shallow pits. Each of the three recorded pits had associations of scattered ash, burned and broken shell, and fragmentary pieces of fire-broken rock. Similar features have been interpreted as steaming pits at other Gulf of Georgia region archaeological sites (Mitchell 1971, McMurdo 1974, Percy 1975). The steaming process, and the use of shallow pits, is described by Barnett:

> Stones were first placed on the fire and allowed to remain there until it burned out. They were then put in a shallow pit that had been previously dug either under the fire or just to one side of it, and were covered with a layer of fresh leaves, usually of fern, salal or kelp. The meat was then laid on the leaves and was covered with another layer of leaves. Over the top was sprinkled a little water which percolated through to the stones. The whole was finally covered with mats or earth. If earth was used, a fire was sometimes built on top. The steam generated within did the rest . . . Clams were put in it to be steamed open (Barnett 1955: 60–61).

Two of the recorded pit features occur in the lowest stratum of Unit One and are associated with the False Narrows I, Marpole culture type component. The other occurs in False Narrows II deposits and also may be associated with Marpole.

Given the nature of the midden, the amount of mollusc processing taking place on-site as evident from the volume of discarded shell, and the approximate 2,000 year duration of site

Table 5 Cultural Features Recorded During the 1966 and 1967 Excavation Seasons

No.	Type	Unit	Depth	Comp.	Year	Comments
1	ash con.	3	60 dbd	FN I	1966	
2	post hole	3	90 dbd	FN I	1966	
4	post hole	3	??	FN I	1966	
7	burial fea.	1	135 dbd	FN I	1966	concentration of nine dentalia
8	burial fea.	1	128 dbd	FN I	1966	concentration of 11 dentalia
9	rock clus.	1	80 dbd	FN I	1967	
10	ash con.	1	120 dbd	FN I	1967	
11	burial fea.	1	95 dbd	FN I	1967	burial 33 shell bead concentration
12	burial fea.	1	80 dbd	FN I	1967	burial 25 shell bead concentration
13	ash con.	1	125 dbd	FN I	1967	
14	rock clus.	1	125 dbd	FN I	1967	
16	ash con.	1	140 dbd	FN I	1967	in association with burned shell
18	pit feature	1	280 dbd	FN I	1967	excavated into subsoil and includes feature 19
20	rock clus.	6	70 dbd	FN IV	1967	
21	burial fea.	1	80 dbd	FN I	1967	burial 25 bead concentration
23	ash con.	6	80 dbd	FN IV	1967	associated with fire broken rock
24	ash con.	1	185 dbd	FN I	1967	
25	pit feature	1	230 dbd	FN I	1967	pit fill incorporates charcoal, bone and fire broken rock. This also includes feature 26.
27	ash con.	6	100 dbd	FN III	1967	associated with fire broken rock
28	rock clus.	1	240 dbd	FN I	1967	includes sandstone slabs
29a	rock clus.	1	260 dbd	FN I	1967	
29b	post hole	1	260 dbd	FN I	1967	profile of 29a
31	ash con.	6	70 dbd	FN IV	1967	
32	ash con.	6	90 dbd	FN IV?	1967	consecutive floor plans includes feature 33
37	pit feature	6	200 dbd	FN II	1967	
38	burial fea.	1	95 dbd	FN I	1967	includes burials 39 and 40,feature 39 and a bead concentration
40	rock clus	6	80 dbd	FN III	1967	
41	ash con.	6	49 dbd	FN IV	1967	
43	ash con.	6	40 dbd	FN III	1967	
44	rock clus.	6	75 dbd	FN III	1967	
48	ash con.	6	180 dbd	FN II	1967	
51	rock clus.	6	30 dbd	FN IV	1967	associated with ash
52	ash con.	6	80 dbd	FN II	1967	associated with fire broken rock
53	burial fea.	6	150 dbd	FN II	1967	shell cairn associated with burials 49 and 50
54a	ash con.	6	170 dbd	FN II	1967	overlap with feature 53
54b	post hole	6	165 dbd	FN II	1967	in profile of 54a
55	burial fea.	6	145 dbd	FN II	1967	successive plans of cairn with burials 49 and 50; includes features 56 and 57 down to 180 dbd
58	burial fea.	6	175 dbd	FN II	1967	pit found with burials 49 and 50
59	rock clus.	6	80 dbd	FN II?	1967	

use, it is hardly surprising to find ash and firebroken rock features associated with cooking and other domestic uses of fire. Fire-broken rock concentrations may result from several activities other than the steaming of clams and other foods as described above. For example, water boiling is a primary task in which volumes of fire-broken rock are produced. The use of stones in boiling water is again reported upon for the Coast Salish by Barnett. As he (1955: 61) describes it, ". . . heated rocks were lifted with tongs, dipped in clear water to remove the ashes, and dropped in a wooden box containing water and the meat to be cooked." Thermal fracture occurs either from the initial heating of the stones or in their rapid cooling from immersion in water. Other activities potentially indicated by fire-broken rock range from the use of stone-lined hearth basins to ritual sweat baths.

For most archaeological sites having long term use and evidence for former architecture, one expects to find numerous post moulds. Post holes result from house construction, drying rack construction and other tasks requiring set uprights. With only four such features reported for False Narrows, post moulds are unexplainably scarce. Mitchell (1967: 8) has associated one of the post moulds with Marpole culture type house construction. This feature was situated in Unit Three within the "huge" house platform on the site's second terrace. Other post hole features appear to relate to nonarchitectural functions (*see* Figure 10). Two of the latter are associated with False Narrows I and the other is affiliated with False Narrows II. Recorded post moulds are absent in deposits associated with the Gulf of Georgia culture type and historic components.

The final class of recorded features incorporates several that are associated with the large burial assemblage. This includes grave good concentrations, pit features, rock slabs and other burial furniture. These features are described and interpreted in the following section on site mortuary patterns.

Aside from feature descriptions, the spatial distribution of artifact functional types was examined in the hopes that they might be used to interpret settlement pattern or site activities. With one exception, patterning is absent. The exception occurs within the False Narrows I occupation of Unit One. Here, within a single stratum, the majority of distal perforated needles was recovered. This association seems indicative of a tool kit, perhaps for use in clothing or net manufacture.

Excavated features and spatial association of artifacts at False Narrows, while failing to provide definitive insight into settlement pattern, do reflect upon site occupancy. The presence of ash concentrations, fire cracked rock features and probable steaming pits illustrates a range of domestic activities being carried out. The burial features, as they are interpreted in the following section, provide data on social organization and ritual. Unfortunately, two of the most important features for interpretive purposes were not documented in detail. These include the pair of house platforms reported by Mitchell (1967). Such platforms illustrate the presence of large scale architecture during the Marpole culture type. House platforms are present at the Beach Grove site (Ham 1981; Matson, Ludowicz and Boyd 1980) and this again documents the close similarity between Beach Grove and False Narrows. Sizes for the False Narrows' house platforms are unknown. Coast Salish cedar plank winter houses, as recorded by Suttles (1974: 256) were ". . . 30 to 50 feet wide and 50 to 200 feet long or longer".

The evidence for standing architecture during False Narrows I, but not later, is likely to be a problem of archaeological recognition rather than some substantive change in site use. This difference, nevertheless, does parallel a definite change in intra-site settlement pattern that has been documented through the spatial separation of components. The False Narrows I, middle Marpole culture type component, occurs on the upper bench; more recent components are situated below. Earlier I noted that Mitchell (1971: 66) interprets this separation to be the result of a region wide sea level drop. I also pointed out that Fladmark (1975: 149) believes transitions such as this to be more likely the result of localized tectonic factors. Neither of these explanations denies the fact that such a transition occurred; at False Narrows this resulted in a shift in site area use.

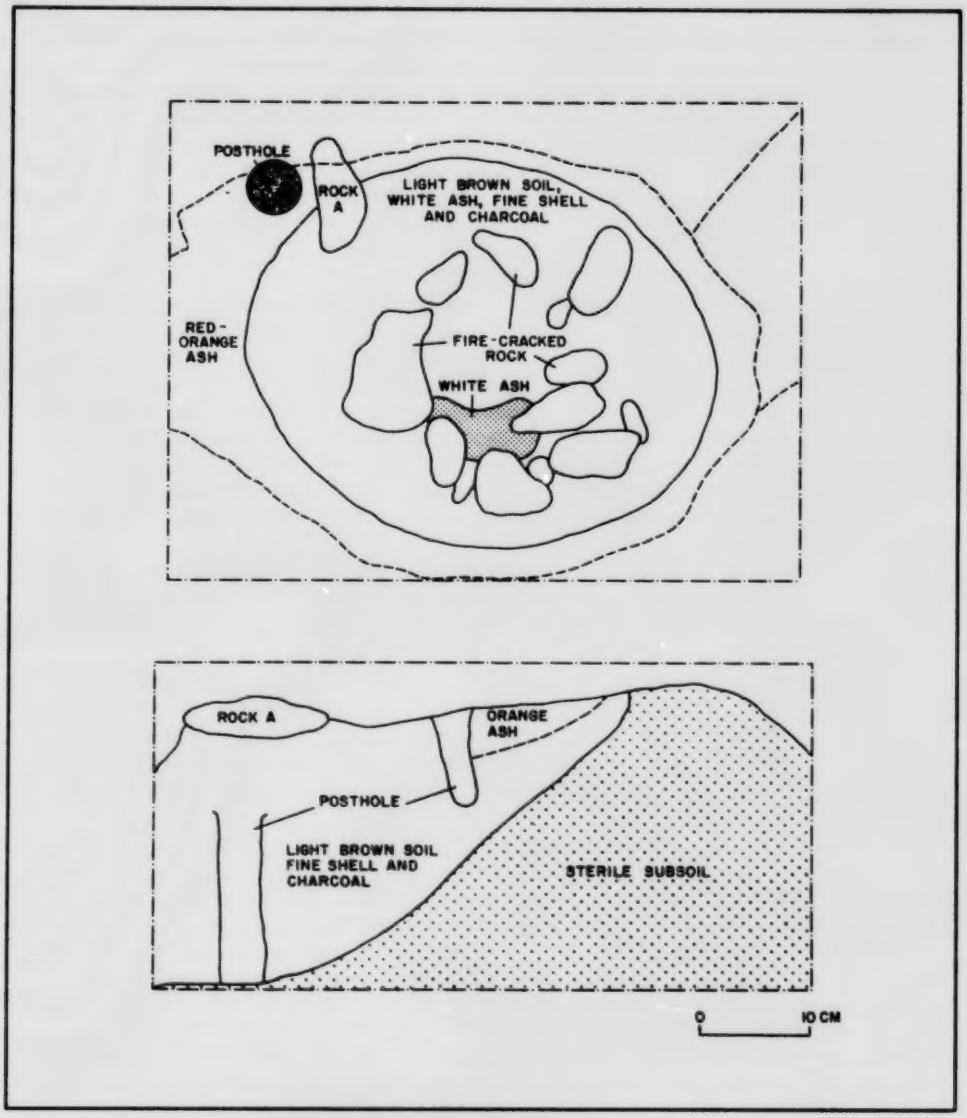

Figure 10. Features 54a and 54b — Ash, Firebroken Rock and Posthole.

False Narrows Within Regional Settlement Pattern

The Coast Salish are reported in ethnographic accounts to have a diversified subsistence base and a well developed technology for its exploitation. Mitchell (1971: 29) proposes four variations of the regional adaptation. These consist of the Northern Gulf diversified fishermen, the Central and Southern Gulf river fishermen, the Straits reef net fishermen and the Puget Sound diversified fishermen. The Halkomelem speaking Nanaimo fall within the Central and southern Gulf river fishermen. They had a reliance upon the Fraser River fishery, and they did not employ the reef net technology associated with their Straits neighbours.

Ethnographic data relative to an understanding of Coast Salish settlement/subsistence is abundant (among others Boas 1889; Jenness n.d., 1955; Suttles 1974, 1987; Barnett 1938,

1955; Duff 1952; Rozen 1985). Although care must be taken in using these data for archaeological purposes, it is generally agreed that ethnographic analogy and the direct historic approach are appropriate methodologies for regional interpretation of late prehistoric remains. For the Nanaimo in particular, the research of Jenness (n.d.) and Barnett (1955) is instrumental in examining the seasonal round of the early historic period and the role of the False Narrows site in that cycle.

The Nanaimo are earlier described as having five closely associated communities. With their main winter villages located on Nanaimo harbour and Departure Bay (Barnett 1955: 23, Rozen 1985: 50–51), Nanaimo settlement pattern can be characterized as having a high degree of mobility. Indeed, Mitchell (1971: 27) has estimated a 500 km traveling distance associated with Nanaimo seasonal movements. These seasonal movements involved travel within their recognized territory on Vancouver Island and smaller adjacent islands such as Gabriola (*see* Boas 1889) as well as a crossing of the Strait of Georgia to the Fraser River.

The ethnographies of Jenness (n.d.) and Barnett (1955) provide similar details on the site of Senewélets at False Narrows and its importance to Nanaimo subsistence pursuits. Both concur that its main season of use was the spring. Leaving their winter village locations in March or April, Jenness (n.d.: 9) reports that the Nanaimo moved to Gabriola Island and False Narrows to carry out several economic pursuits. Shellfish gathering, fishing for cod, "grilse" and other species, hunting of seals and sea lions and the harvesting of camas are among those dominating his list. An early spring occupation of False Narrows coincided in the historic period with extreme low tides during daylight and this, no doubt, enhanced shell fish collecting in the Narrows. Barnett (1955: 23), while implying a more temporary use of False Narrows, lists "egging" as another of the activities being undertaken. Rozen (1985: 54) explains "egging" to refer to the collecting of sea urchins (sea eggs).

Although Jenness (n.d.: 9) suggests the Nanaimo continued to exploit resources at False Narrows until August, Duff (1952: 11, 25) indicates they began to cross to the Fraser River by the beginning of July. From the mouth of the Fraser, they moved upriver to an established summer village to fish for sockeye (*Oncorhynchus nerka* Walbaum), to hunt, and to gather various plant foods. Duff (1952: 25) describes this yearly pilgrimage:

> Large numbers of Cowichan and Nanaimo Indians came from Vancouver Island each summer to fish, and these two tribes had summer villages along the lower reaches of the river. When James MacMillan and his party first sailed up the river in the 'Cadboro' in July, 1827, they passed three Cowichan villages and one Nanaimo village.

The Nanaimo village was located near Fort Langley and "MacMillan estimated that it contained some 400 souls" (Duff 1952: 25). Rozen (1985: 57) situates this village opposite the southeastern tip of Barnston Island near the confluence of the Pitt and Fraser rivers.

Albright (1985: 62) lists several potential economic pursuits that might be undertaken in the vicinity of the Nanaimo summer village between late June and late September. Aside from the sockeye fishery, this list includes the hunting of deer, wapiti, mountain goat and bear, the collection and drying of rushes for mats, the gathering of berries and other fruits, the fishing of trout and, if the stay extended into September, the fishing of other salmon species including the humpback salmon (*Oncorhynchus gorbuscha* Walbaum). Albright (1985: 60–61) also states that after the construction of Fort Langley ". . . it was noted that as many as 5000 native people from various groups would gather in the vicinity of Pitt River in October and November to dig wapato (*Sagittaria latifolia*)". Duff (1952: 25) however, states that by the end of September, the Nanaimo had left the Fraser River moving back to Vancouver Island with their various food stores.

The fall villages for the five named groups of Nanaimo were situated along the Nanaimo River. From here the local salmon fishery, principally consisting of chum salmon (*Oncorhynchus keta* Walbaum), was exploited. Fishing continued into December when a return to the winter village sites marked the beginning of the ceremonial season.

The late spring Nanaimo movement to the Fraser River, aside from subsistence, brought additional economic and social benefits. Duff (1952: 95), for example, notes the occurrence of intermarriage between mainland Halkomelem peoples and those from the islands. The summer fishery provided an opportunity to renew and solidify these kin relations. Rozen's

(1985: 53) informants also suggest that mainland/island travel frequently took place throughout the winter months ". . . for the purpose of attending winter spirit dances and other gatherings at the villages of their relatives." Kinship ties would be crucial in the maintenance of rights both to the river fishery and to a summer village location on the Fraser.

Another of the important benefits associated with a seasonal migration is trade. Lulu Island, at the mouth of the Fraser River, was strategically located for exchange between groups living along the Fraser and peoples who would be coming to fish. While a variety of commodities were involved in this exchange system, dried clams are singled out by Barnett as a highly sought after item. He states (1955: 68):

> Clams were at a premium near the mouth of the Fraser River, for they could not live in the fresh water from Vancouver to Point Roberts. The Homalco were said not to have liked clams, and it may be that their distaste was grounded on a lack of access to them. On the other hand, the Fraser River groups did like them and were eager to gather and trade for them when they could.

The Nanaimo use of False Narrows prior to their movement to the Fraser River takes on new meaning in light of Barnett's statements. Provided Thompson' s (1913) high assessments of shell fish productivity for the tidal flats at False Narrows are correct, the Nanaimo would have been able to gather surpluses beyond those needed for immediate consumption.

Barnett (1955: 68) suggests that a desire for trade brought together potential enemies for mutual advantage. However, he is unwilling to speculate on how much time depth might be associated with this "custom of congregating" at the mouth of the Fraser. The exceptional similarities between those sites lumped into the Beach Grove variant of the Marpole culture type in the preceding chapter argues for a considerable continuity of tradition. In fact, given the close linguistic relationships between island and mainland Halkomelem speaking peoples, the security of summer village locations along the Fraser River in historic times, and the practice of intermarriage, the Beach Grove variant might be interpreted as an ethnic representation or subgroup of Halkomelem. Although speculative, its appearance in the Gulf Islands could also document the movement of Halkomelem speakers from the Fraser River into the islands during the Marpole culture type. What is not speculation is the existence of a close relationship between the people at Senewélets, and those at the mouth of the Fraser River, for a period of at least 2,000 years.

Is the seasonal use of False Narrows and Gabriola Island by historic Nanaimo groups an accurate representation of prehistory? Without a detailed analysis of faunal remains, seasonality for each of the four components cannot be ascertained. Historical and archaeological data, however, provide hints that the answer may be yes. In early July of 1791, Narvaez records an Indian village on the southeast end of Gabriola Island most probably in the vicinity of Silva Bay (Wagner 1933: 40). Since there is no mention of its having been abandoned, I suggest that the inhabitants were following the pattern of spring use of Gabriola Island as recorded in ethnographic accounts. Indirect support for this comes from the following year records of Galiano (Wagner 1933: 255). While he encountered Indians in Nanaimo harbour, his only direct observations of their village on June 17th describe it as abandoned, with house frames stripped of their boards.

The archaeological context of the False Narrows locale generally, and the site of Senewélets, can be used to support the proposed model of seasonal site use. The house platforms associated with the Marpole culture type indicate permanent architecture and a use of this site that is more than a temporary resource procurement locale from other village locations. Rozen (1985: 59), citing Barnett's field notes, also states that there were ". . . permanent house-frames on the Gabriola Island side of the Narrows" and that the Nanaimo ". . . then transported the roof and wall-planks from their Nanaimo River and Departure Bay houses". Although permanent house frames are not documented through archaeological evidence, if False Narrows were occupied for a two or three month period as proposed, their presence can be expected (*see* Barnett 1955: 39).

False Narrows is only one of several large midden sites on Gabriola Island, Mudge Island, Newcastle Island and along the adjacent shoreline of Vancouver Island. This site distribution seemingly illustrates a prehistoric Nanaimo population that equates well with, or even surpasses, Duff's (1961: 2) estimate of 1,100 individuals for the year 1780. On the

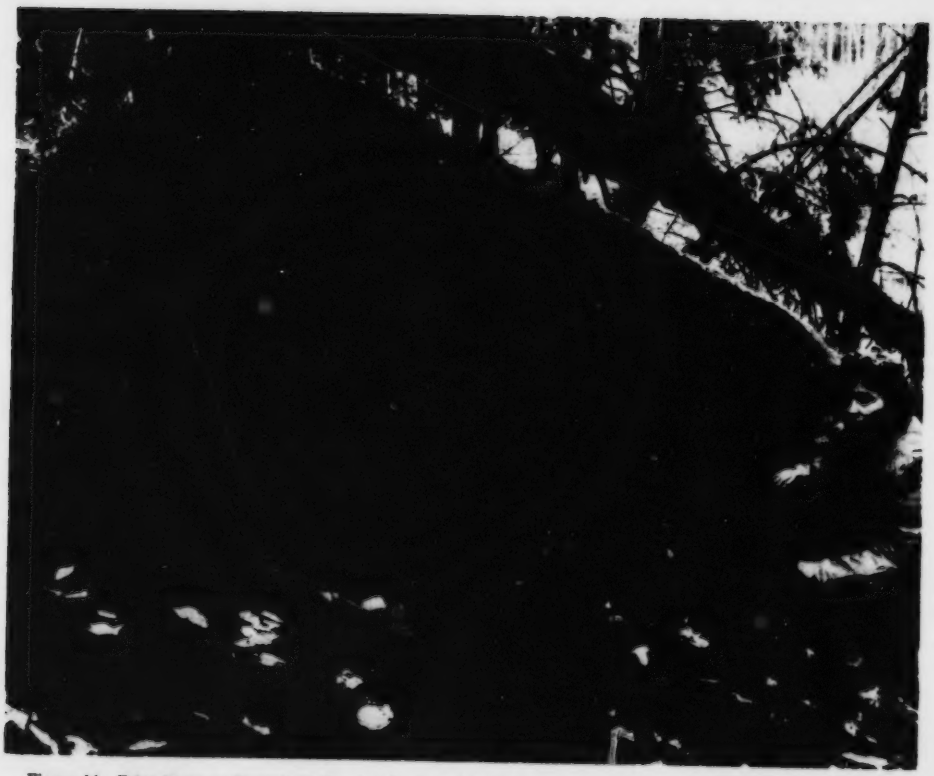

Figure 11. False Narrows Petroglyph Panel at DgRw 198 (photo courtesy of P. Hobler, Simon Fraser University).

Gabriola Island bluffs behind False Narrows, I have earlier described Wilson's (1987) recent test excavations and recording of several sites that provide new perspectives on the occupation of Senewélets. Among these are a number of inland middens, three petroglyph sites and three isolated burial sites including one burial cave. The inland middens are intriguing for they indicate the transport of shell fish to temporary use sites away from the water's edge. Although speculative without excavation, several of these likely served as defensive locations for people exploiting the resources along False Narrows. One (DgRw 200) has a radiocarbon date of 2,490 B.P. taken from marine shell (*ibid:* 46). Shell dates are problematic and the date for this site may be more recent than indicated. Even with a several hundred year correction however, it would continue to fall within the Marpole culture type.

The petroglyph and burial sites recorded by Wilson illustrate the long term importance of False Narrows in the ritual life of the Nanaimo. In the following section, the relative uniqueness of the burial population interred in the False Narrows midden is emphasized; the nearby presence of a burial cave, crevice interments, and other isolated burials adds to this. Equally interesting are the frequency, the abundance, and the execution of the petroglyphs (Figure 11) (*also see* Bentley and Bentley 1981). Lundy (1974: 341) suggests Northwest Coast rock art functions as a commemorative device identifying privilege, specific events or ritualistic practice. The various panels adjacent to False Narrows incorporate a wide range of zoomorphic and anthropomorphic motifs that, potentially, represent any one of these themes. Wilson (1987: 57) has classified all but one of the motifs as falling within the "Basic Coast conventionalized style". Finally, both in respect to the petroglyphs and the ritual importance of False Narrows, it is interesting to note that Boas (1885 as cited in Rozen 1985: 61) describes the locale as central to at least one Nanaimo myth. In accounting for the origins of fire, this myth describes a large house at False Narrows in which Mink lived with his grandmother.

In summary, references to Senewélets and Gabriola Island in ethnographic accounts, the archaeological context of the midden, and similarities found within the Beach Grove variant of the Marpole culture type suggest long term antiquity for the historic Nanaimo settlement pattern. In this pattern, the Nanaimo, or at least one segment of the population, moved from their winter village site in the early spring to standing house frames at False Narrows; subsequent abandonment took place in July. Several sites on the bluffs behind False Narrows illustrate both a concern for defense and the importance of this location in Nanaimo ceremonialism.

FALSE NARROWS BURIAL POPULATION

Few midden excavations on the Northwest Coast do not encounter burials and the False Narrows project was no exception. From the 1966 and 1967 field seasons, 50 interments representing a minimum of 86 individuals were excavated. This sample incorporates both males and females as well as individuals from all age groups. Interment type and grave furniture for this burial population are also varied. The following section first examines demographic interpretations for the burial sample. Secondly, I turn to a description and analysis of mortuary patterns for the former inhabitants of Senewélets. Finally, the implications of grave good associations as they relate to potential interpretations of social stratification and ritual are discussed.

Physical Population

Gordon (1974) has undertaken a qualitative analysis of the False Narrows skeletal materials. Her central research problem focused upon a definition of nonmetric population traits and a documentation of change in these traits over time. To conduct her analysis, each False Narrows burial was assigned either to a Marpole or Coast Salish sample. For comparative purposes, these were treated as separate populations. In my analysis of the False Narrows archaeological assemblage, a reassessment of component associations for each burial was necessary; a small number of discrepancies occurred.

Gordon's (1974) assignment of burials to Marpole or Coast Salish components was based upon the spatial location of the burial and styles of associated grave goods. This was undertaken without the benefits of a detailed assemblage analysis or a contemporary perspective of culture history in the Gulf of Georgia region. In my examination of the burial population, using criteria similar to Gordon's, I have added four individuals to the Coast Salish sample that, previously, had been classed as Marpole. This brings the total Coast Salish sample size to nine. In addition, there are several interments in the upper strata of Unit One that do not have grave goods. Both Gordon and I have assigned them to the Marpole population (False Narrows I) but they might equally be associated with a later site occupancy. The degree to which such discrepancies may alter specific aspects of Gordon's interpretation is unknown. Her main conclusion of population continuity between Marpole and Coast Salish samples, however, is strongly supported in my analyses of the site artifact assemblage. It also has been supported by the more recent osteological studies of Beattie (1981).

From her analysis of the False Narrows skeletal population, Gordon concludes the following:

> (1) Marpole and Coast Salish samples can be distinguished by cranial deformation type. Predominant during the Marpole period was "lambdoidal" deformation while on the only two individuals complete enough for determination in the late sample, deformation was of the "fronto-occipital" variety (*ibid:* 4–7).
>
> (2) A third form of deformation, "parallelo-fronto-occipital" or "Chinook type" was noted on a single Marpole individual. Its presence is attributed either to a "separate component" or a "nonnative" (*ibid:* 7).
>
> (3) Mortality curves for the Marpole sample show a surprising low infant mortality with differential peaks for female and male death. Fifty percent of females died within the 18 to 30 year age bracket with male deaths more evenly distributed across intervals (*ibid:* Figure 4).
>
> (4) Several nonmetric skeletal traits are found in both samples. Since a number do not overlap, these ". . . may indicate possible genetic differences between the cultures (*ibid:* 72)."
>
> (5) Dentition, pathologies and muscle attachment, taken together, indicate a similar lifestyle for both groups. The nutritional base is considered adequate (*ibid:* 73).
>
> (6) It is probable that Coast Salish developed out of Marpole with micro-evolution of several morphological traits paralleling changes in material culture (*ibid:* 73).

Of the preceding conclusions, perhaps the most significant is the separation of population samples on the basis of cranial deformation. Artificial cranial deformation, as practised among the historic Coast Salish, was carried out in infancy through the binding of a cradleboard secured pad to the child's forehead (Barnett 1955: 75). Cranial deformation

produced by Coast Salish pad binding is referred to by Boas (1890: 647) as the Cowichan type. At False Narrows, a variant of this form has been termed fronto-occipital by Gordon (also referred to as bilateral by Beattie 1981: 46). It is characterized by markedly flattened occipital areas with the frontal area only mildly flattened (Gordon 1974: 7). Although fronto-occipital deformation is most commonly associated with the Gulf of Georgia culture type, as implied by Gordon's results, it also has been found in a number of Marpole burial populations (Beattie 1981: 61). It is questionable, therefore, whether cranial deformation can be used as a discrete trait for the definition of Marpole versus Coast Salish populations.

Lambdoidal deformation is not as pronounced as fronto-occipital. As defined by Gordon (1974: 4), deformation extends from just above the external occipital protruberance to the parietal foramina creating an angle of 30 to 40 degrees. Lambdoidal deformation is almost exclusively associated with individuals of the Marpole culture type or slightly earlier. Beattie (1981: 60) suggests lambdoidal deformation may originally have been unintentional, coming about as a side effect of cradle board use. Over time, intentional deformation became a culturally accepted aesthetic resulting in more extreme forms such as the fronto-occipital type described by Gordon.

Whether or not the False Narrows burial population can be separated into two temporal groups based on head deformation type has little consequence for population interpretation. I believe that the presence and continued practice of head deformation over the full span of site occupation supports other lines of evidence for population continuity. It also, unfortunately, alters cranial traits to the point where metric analyses become suspect.

Table 6 provides population statistics and other burial data for each of the excavated individuals. In reference to the data incorporated in Table 6, Gordon (1974: 15) suggests there exists a good demographic cross section of the population with surprisingly low infant mortality. Combined with her observations on lifestyle and nutrition, one must conclude that the prehistoric Nanaimo were well adapted to their environment.

Burial Patterns

Historic Coast Salish burial practices in the Gulf of Georgia region did not include midden interments, beyond those attributed to the influences of white contact. Rather, following an elaborate preparation, the individual was placed either within a box or in a canoe. The canoe or box was then positioned on posts, placed in a tree, left exposed on the ground, or in the case of the box, moved to an above ground burial house (for elaborate descriptions *see* Barnett 1955; Suttles 1974; Duff 1952; Yarrow 1880, Eells 1985). The many disarticulated human skeletal elements found throughout the False Narrows midden may reflect these above ground disposal procedures. However, the abundant presence of not only intentional, but well planned interments, at False Narrows and other sites in the Gulf of Georgia region (e.g., Hall and Haggarty 1981) illustrates at least one point of departure for prehistoric burial patterns.

A variety of interment types characterize the False Narrows burial sample. The most common form is a shallow pit inhumation. The body, extended or in a flexed position, has simply been placed within a shallow grave dug into the former midden surface. This form of burial is found associated both with the False Narrows I, Marpole component and the later False Narrows III, Gulf of Georgia culture type component. In addition to the articulated primary interment, these pits frequently include scattered elements of other individuals that are identified in Table 6 as sub-burials.

A second form of interment, the rock slab burial type, is characterized by a flexed burial position and an association of one or more large rock slabs (*see* Mitchell 1971: 54) (Figure 12). Frequently these rock(s) are positioned over some portion of the skeleton. Two interpretations of this burial form can be offered. First, since this type has a widespread distribution throughout the Gulf of Georgia region (Mitchell 1971: 179), the placement of a stone slab on the body may represent a ritual pattern. The absence of a specific standard for rock placement, the presence of interments without the rock, and the lack of supportive ethnographic data, suggests otherwise, however. As an alternative, I suggest that the stone

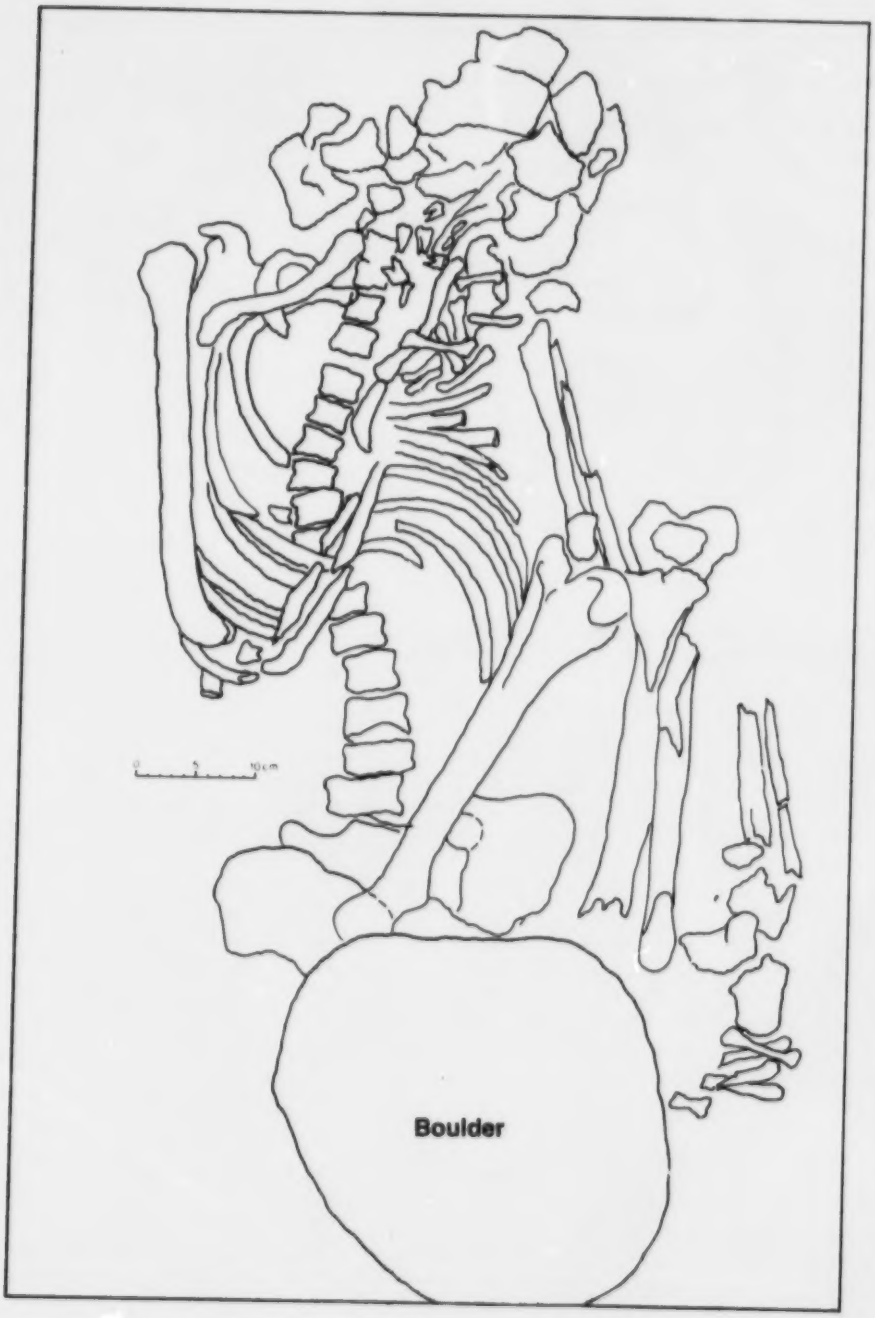

Figure 12. Burial 44 — Rock Slab Interment Plan Drawing.

Table 6 Burial Features and Population Data for the False Narrows Site

No.	Age	Sex	Bur. Type	Cran. Faces	Body Pos.	Body Orien.	Grave Goods	Cranial Deform.	Area	Comp
1a-66	25-35	Fem	Pit/Sur	NW	Flex	E/W	yes	???	1	FN I
1b-66	25-35	Fem	Pit/Sur	??	??	??	???	???	1	FN I
2-66	20-30	Fem	Pit/Sur	E	??	??	yes	Lam	1	FN I
2a-67	18-21	Male	Pit/Sur	??	??	NW?	???	???	1	FN I
2b-67	20-30	Fem	Pit/Sur	??	??	NW?	???	???	1	FN I
2c-67	adult	???	Pit/Sur	??	??	NW?	???	???	1	FN I
3a-66	25-35	Male	Rock?	??	??	??	yes	Lam	1	FN I
3b-66	4-6	Fem	???	??	??	??	???	???	1	FN I
3c-66	10-11	???	???	??	??	??	???	???	1	FN I
3d-66	adult	Male	???	??	??	??	???	???	1	FN I
4a-66	adult	???	Rock?	??	??	??	no	???	1	FN I
4b-66	adult	???	???	??	??	??	no	???	1	FN I
4a-67	0-4mo	Fem	???	??	??	??	no	???	1	FN I
4b-67	0-4mo	???	???	??	??	??	no	???	1	FN I
4c-67	.5-2	???	???	??	??	??	no	???	1	FN I
4d-67	18-25	Fem	???	SW	Flex	NE	no	Lam	1	FN I
4e-67	20-30	Fem	???	??	??	??	no	???	1	FN I
4f-67	30-40	Male	???	??	??	??	no	???	1	FN I
5a-67	17-21	Male	Rock?	NW	??	SW	yes	Lam	1	FN I
5b-67	17+	???	???	??	??	??	???	???	1	FN I
6a-66	8-14	Fem	???	??	Flex	W	no	???	1	FN I
6b-66	6-9	Male	???	??	??	??	no	???	1	FN I
7a-66	8-13	???	Rock	??	Flex	NW	no	???	1	FN I
7b-66	adult	???	Rock?	??	??	??	no	???	1	FN I
8-67	8-11	Male	Sur?	S	Flex	N	no	Lam	1	FN I
9-66	4-7	???	Pit	W	Flex	NW	yes	???	1	FN I
10a-66	20-30	???	Pit?	??	??	??	???	???	1	FN I
10b-66	13-18	???	Pit?	??	??	??	???	???	1	FN I
10c-66	20-30	Fem	Pit?	SE	Flex?	SE	yes	???	1	FN I
11-66	30-40	Fem	Pit?	SW	Flex	SW	yes	Lam	1	FN I
12a-66	11-13	Male	Pit?	E	??	E	no	La	1	FN I
12b-66	11-15	Male	Pit?	??	??	??	no	???	1	FN I
13-66	11-15	Male	Pit?	??	??	??	no	???	1	FN I
14-66	5-9	Male	Rock	??	Flex	N	no	???	1	FN I
15-66	17-19	Male	Pit	??	Flex	NE	no	???	1	FN I
16-66	adol	Male	Pit	S	Flex	N	yes	???	1	FN I
17a-66	30-40	Fem	Pit	N?	Flex	SW	no	Lam	5	FN I
17b-66	adult	???	Pit?	??	??	??	no	???	5	FN I
18a-66	30-40	Male	Pit	S	Flex	NW	no	Undef	5	FN I
18b-66	child	???	Pit?	??	??	??	no	???	5	FN I
19-67	20-30	Male	Sur?	W	Flex?	NE	no	Undef	1	FN I
20-67	30-40	Fem	Sur?	S	??	W	no	Lam	1	FN I
21-67	10-14	Fem	Pit	W	Flex	W	no	Undef	1	FN I
22a-67	30-40	Male	???	??	??	??	no	Lam	1	FN I
22b-67	???	???	???	??	??	??	no	???	1	FN I
23a-67	30-40	Male	Pit	SE	Flex	NW	yes	Undef	1	FN I
23b-67	adult	???	Pit?	??	??	??	??	???	1	FN I
23c-67	adult	???	???	??	??	??	??	???	1	FN I

??? refers to an undetermined trait or questionable association.

Table 6 Burial Features and Population Data for the False Narrows Site — *Continued*

No.	Age	Sex	Bur. Type	Cran. Faces	Body Pos.	Body Orien.	Grave Goods	Cranial Deform.	Area	Comp
24-67	25-35	???	???	??	??	??	no	???	1	FN I
25-67	11-13	Male	Pit?	W	Flex	W	yes	???	1	FN I
26a-67	20-25	Fem	???	SW	Flex	SW	no	???	1	FN I
26b-67	adult	???	???	??	??	??	no	???	1	FN I
27-67	7-9	Male	Pit	??	Exten	W	yes	Undef	1	FN I
28a-67	23-28	Male	???	SW	Exten	SW	no	???	1	FN I
28b-67	0-4mo	???	???	??	??	??	no	???	1	FN I
29-67	???	???	???	SW	??	SW	no	???	1	FN I
30a-67	30-40	Fem	???	??	??	??	no	???	1	FN I
30b-67	adult	Male	???	??	??	??	no	???	1	FN I
30c-67	adult	Male	???	??	??	??	no	???	1	FN I
31-67	30-40	Fem	Sur?	SE	??	S	no	Lam	1	FN I
33-67	8-14	Male	Pit	E	Ext	E	yes	Lam	1	FN I
34a-67	20-30	Male	???	W	Flex	W	yes	Lam	1	FN I
34b-67	adult	???	???	??	??	??	???	???	1	FN I
35-67	6-8	Fem	??	S	Flex	S	yes	??	6	FN III
36-67	40-50	Male	Pit	E	Flex	S	no	F-O	6	FN III
37-67	20-30	Fem	Pit	SW	Flex	SW	no	???	6	FN III
39-67	30-40	Male	Pit	S	Flex	E	no	Lam	1	FN I
40a-67	25-35	Male	Pit	??	Flex	N	yes	Lam	1	FN I
40b-67	adult	???	Pit?	??	??	??	???	???	1	FN I
41-67	15-20	Fem	Cairn	S	??	S	yes	Chin	7	???
42-67	30-40	Male	Rock?	S	??	??	no	???	7	???
43-67	15-20	Male	???	??	??	??	??	???	7	???
44a-67	30-40	Male	Rock	SW	Flex	E	no	undef	6	FN III
44b-67	Fem	???	???	??	??	??	no	???	6	FN III
45a-67	40-50	Male	Rock	S	Flex	E	no	Lam	6	FN III
45b-67	25-35	Fem	???	??	??	??	no	Lam	6	FN III
46-68	30-40	Fem	Pit	S	Flex	E	no	F-O	6	FN III
47-67	17-21	Male	Pit	E	Flex	SE	no	???	6	FN III
48-67	3-5	Fem	Pit	E	Flex	SE	yes	???	6	FN II
49a-67	25-35	Fem	Cairn	N	Flex	NW	yes	Lam	6	FN II
49b-67	adult	???	???	??	??	??	???	???	6	FN II
50-67	0-4mo	Fem	Cairn	??	??	??	no	???	6	FN II
51a-67	30-40	Male	???	??	Flex	SE	no	???	6	FN II
51b-67	0-4mo	???	???	??	??	??	no	???	6	FN II
52-67	adol	Male	???	E	??	E	yes	???	1	FN I

slabs may have been used either as lid weights on burial boxes or used as a cover for boxes without lids. For the Puget Sound Coast Salish, Haeberlin and Gunther (1930: 53) describe the practice of weighing down lids to protect the corpse from scavengers. Haeberlin and Gunther's observations were for boxes left on the surface. Why lid weights would be required for below surface burials is open to question.

A pair of cairn burials are a third type of interment found at False Narrows. Both are associated with what I consider to be unique individuals on site. The first of these (Burial 41) is a female with Chinook style cranial deformation as reported by Gordon (1974: 7). Although the lower half of the interment had been removed by backhoe excavations in Unit Seven, exposure of the upper torso revealed a pair of large sandstone slabs enclosing the body. The grave inclusion of a dentalium necklace potentially identifies the individual as having a

ranked status in the social hierarchy. The Chinook style of deformation was historically practised by groups along the middle Columbia River region (Beattie 1981: 46). Its presence at False Narrows suggests the woman to be an outsider. Suttles (1974: 289–293) describes several cases of Coast Salish "extratribal" marriage as a means of forming kinship alliances for defence and other purposes. The elaborateness of the burial does not appear to be characteristic of what might be expected for a captured slave.

The second cairn burial consists of several rocks covering a female who seems to have died in childbirth (Burials 49 and 50). Neatly stacked on top of the rock covering were the valves of several large horse clams (Figure 13). The woman, in a tightly flexed position, had an infant enclosed within her mid region, lying in a foetal position with head engaged in the pelvis (Figure 14). A single scallop shell pendant was associated with this burial.

A multiple interment (Burials 21, 25 and 27) (Figure 15), while categorized as a shallow pit type burial, is sufficiently unique to deserve mention. This burial includes a semi-flexed female, flanked by a semi-flexed male on one side, and an extended male on the other. Ranging in age between seven and 14 years, these individuals potentially represent a kin related group. Grave goods associated with the burial consist of a small number of shell disc beads with one of the males, and a nephrite celt with the other. For the Puget Sound Coast Salish, Eells (1985: 338) describes the unsuccessful attempts of a Twana man to have his 11 year old son buried in the same grave with his cousin. He also documents several other cases where reburial was undertaken for the purposes of grouping close kin (*ibid.*: 344).

The large number of disarticulated skeletal elements recovered during the midden excavation has already been noted. This, I believe, is a result of above ground disposal of the dead. While site disturbance or reburial cannot be totally ruled out as causal factors (*see* Suttles 1974: 479; Eells 1985: 344), similar occurrences from other midden excavations are almost always attributed to grave house or tree burials (e.g., Ham 1982). Borden (1970: 112)

Figure 13. Cairn — Burial 49 and 50, Feature 53.

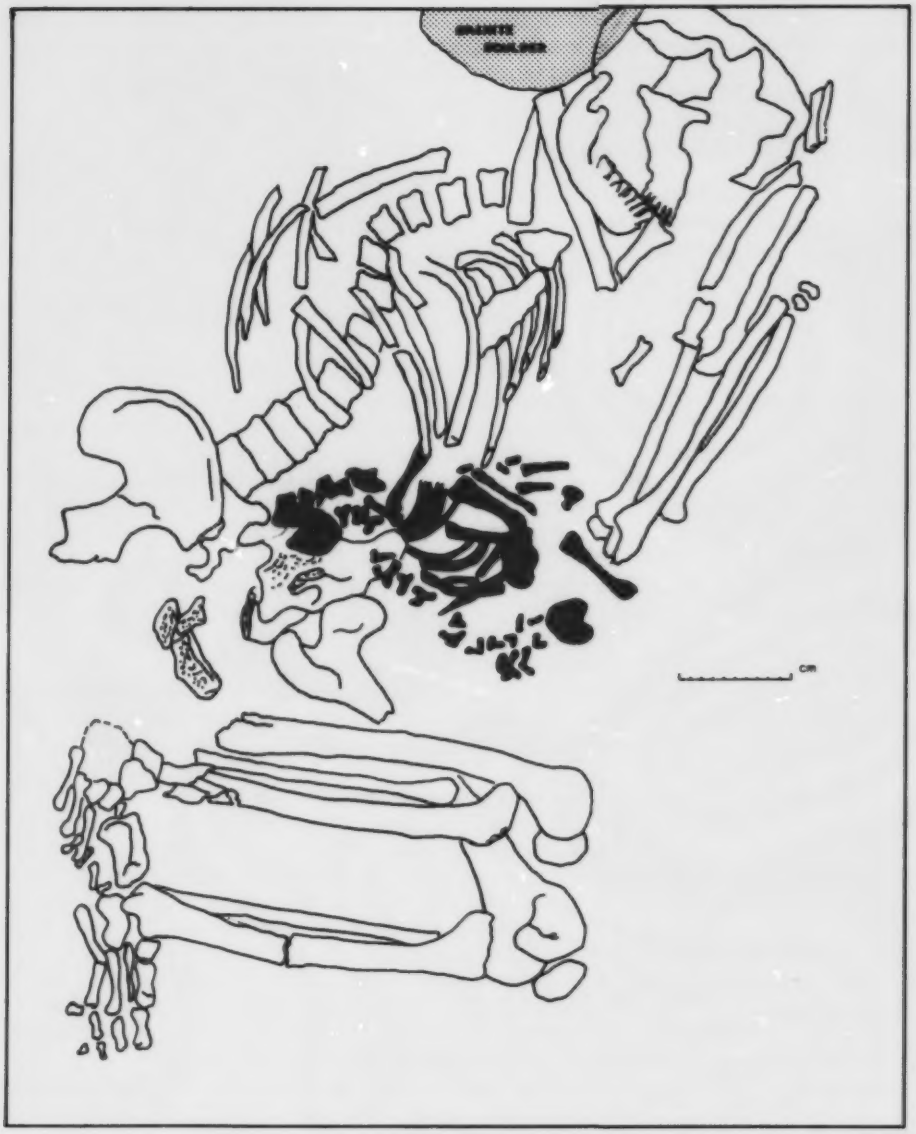

Figure 14. Burials 49 and 50.

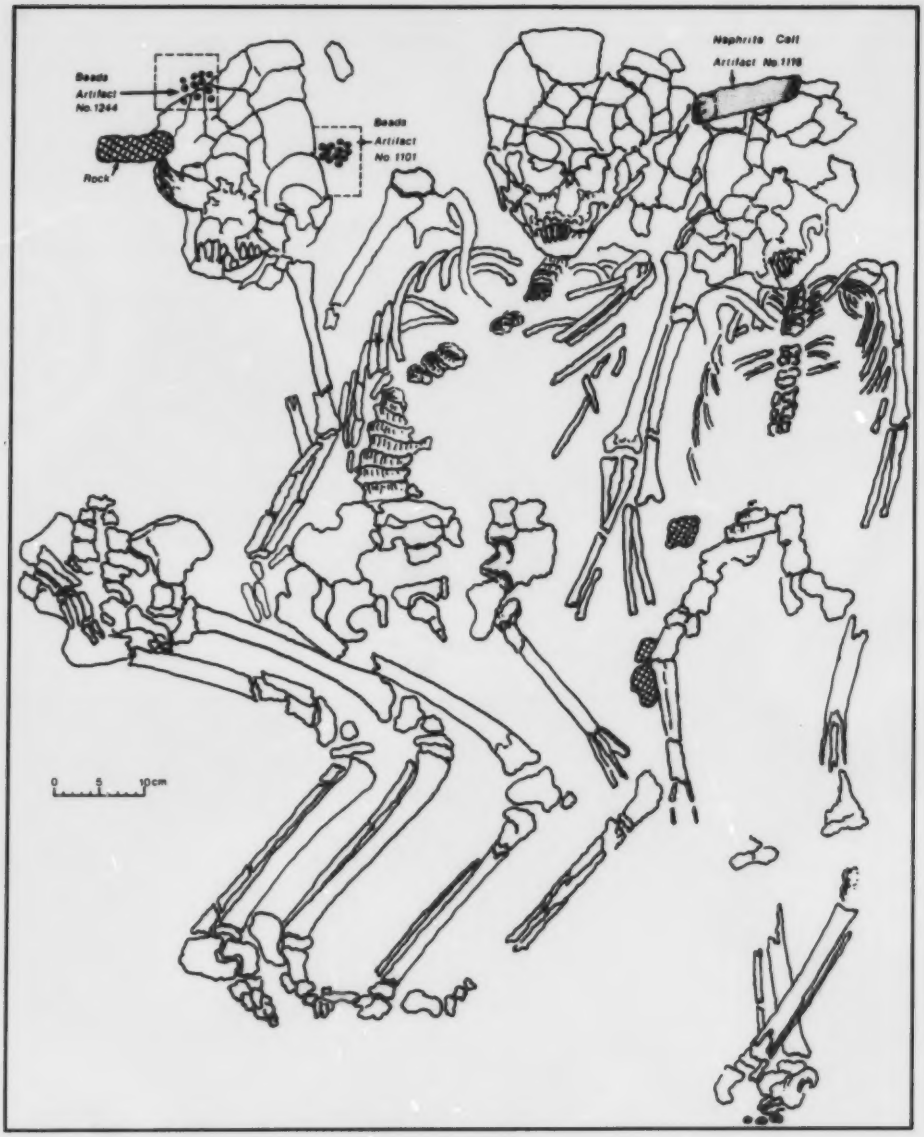

Figure 15. Burials 21, 25 and 27 — Multiple Interment.

argues that above ground disposal practices are characteristic of the late prehistoric Stselax phase (Gulf of Georgia Culture Type). My interpretation of its presence in Marpole deposits at False Narrows indicates a partial continuity in burial tradition.

Thirty-three of the 50 recorded burials incorporating 63 individuals were recovered from Unit One on the site's upper terrace. Because the entire unit has been associated with the earliest Marpole component, False Narrows I, the burials have been assigned to this component. Borden (1970: 105) has suggested that Marpole burials characteristically are found on the inland slope of the village midden". Burial data from False Narrows seems to support this assertion. Also defined as a characteristic of the Marpole culture type, and found at False Narrows, are burials with elaborate grave inclusions, possibly indicating wealth and status (Mitchell 1971: 54; Burley 1980: 29). The potential meaning of these grave inclusions as it relates to societal ranking within the burial sample is now examined.

Grave Goods, Wealth and Social Stratification

Social stratification within Coast Salish culture has been described by Suttles (1987: 17) as incorporating ". . . three distinct social classes — a majority identified as 'high class,' a somewhat smaller group identified as 'low class,' and a still smaller group of slaves". Although the slave class was unequivocal, the line separating upper from lower classes was indistinct or, as Suttles (1974: 302) is careful to qualify, indistinct at this late date. While indistinct, ascribed status and accepted protocol were important in almost all Coast Salish interactions. Rank was also marked after death by differential means of corpse disposal (Suttles 1974: 474) and, in more rare instances, inclusions of wealth (Eells 1985: 337).

In prehistoric context, one must be cautious in interpreting ascribed status from the simple presence of grave goods or other differences in the burial sample. At least two independent levels of rank or class must be illustrated. Each of these ranks must also include a demographic cross section of sex and age. Finally, grave goods must be shown to represent wealth beyond commonplace ritual. By assuming wealth and social position to be interrelated variables for prehistoric Coast Salish society, the False Narrows burial data can be examined for ascribed stratification.

Table 7 identifies all burials at False Narrows that have associated grave goods as identified in field records. This sample, incorporating 19 individuals, illustrates considerable variation in the types of artifacts interred and their frequencies. In Table 7, I have arranged these burials and associated assemblages into an approximate rank order based on my assessment of relative values for artifact types. Before examining the implications of this rank order for the False Narrows burial sample, a discussion of these grave goods is necessary.

From Table 7, there are three observations that can immediately be made from the listing of artifact associations. First, the highest ranked grave, Burial 52, includes an assemblage of items that, with few doubts, incorporates associated elements of ritual paraphernalia. Secondly, two artifact types, dentalia and beads, are not only abundant in several of the interments, but either or both are present in all but two of the graves. Finally, there are several artifacts that, based upon ethnographic analogy, hint either at pure wealth, ritual goods or utilitarian items.

Burial 52 was collected following the 1967 field season as a result of a "pot hunter" exposure. This burial was situated on the midden's back slope, east of Unit One, and it has been assigned to the False Narrows I component. The interment is that of an adolescent male who, at the time of burial, was dressed in what is probably a dance costume with whale bone armlets (Figure 16). Also present are two decorated elk antler tines that may have been incorporated into his outfit or hand held. A zoomorphic pendant, elaborately carved from coal into the shape of a beetle, was recovered from the individual's midsection. Finally shell disc beads, dentalia and teredo pieces are associated with this burial as additional items of personal adornment. Suttle's (1987: 8) has stated that ritual knowledge and the possession of spirit power in Coast Salish society contributed to wealth, and in themselves constituted wealth. Power was received from inanimate objects, supernatural beings or living things. It was possible for an individual to acquire more than one spirit power (Suttles 1974: 338). The

Table 7 False Narrows Interments Ranked by Grave Good Associations

Burial	Sex	Age	Comp.	Grave Goods
52-67	male	adol.	FN I	beetle pendant, two incised elk tines, 2,506 shell beads, three dentalia, three teredo beads, two whale bone armlets
40a-67	male	25-35	FN I	one flaked stone lanceolate biface, one harpoon, three mica pieces, several quartz pebbles, 2,263 shell beads, 71 dentalia, eight teredo shells
16-66	male	adol.	FN I	two large lanceolate bifaces, 1,286 dentalia
2-66	female	20-30	FN I	two ground stone lanceolate points, one copper pendant, 27 dentalia, two stone beads
9-66	undet	4-7	FN I	905 dentalia
10c-66	female	20-30	FN I	515 dentalia
11-66	female	30-40	FN I	one copper fragment, 414 dentalia
33-67	male	8-14	FN I	565 shell beads,26 dentalia, seven teredo beads, one mica piece
25-67	male	11-13	FN I	185 shell beads
23a-67	male	30-40	FN I	four scallop shell rattles, ten shell beads
1a-66	female	25-35	FN I	17 shell beads, 17 dentalia, two teredo beads
35-67	female	6-8	FN III	11 dentalia, one nephrite celt
34a-67	male	20-30	FN I	30 shell beads, one dentalium
49a-67	female	25-35	FN II	one shell pendant
27-67	male	7-9	FN I	one nephrite celt
5a-67	male	17-21	FN I	four dentalia
48-67	female	3-5	FN II	one dentalium
3a-66	male	25-35	FN I	unknown number of scattered shell beads
41-67	female	15-20	other	unknown number of scattered dentalia

elaborateness with which this individual was adorned implies the possession of a great deal of ritual knowledge and a number of spirit helpers. Perhaps included are the whale, the beetle and the elk. This interment is unique and, I suggest, it represents an individual of high status.

Earlier I have examined the origins of west coast dentalia and suggested its acquisition through trade. In many parts of the Northwest coast and interior regions, dentalia were not only considered a valuable, but they were employed as a form of exchange currency (*see* Elmendorf 1974: 216). Suttles (1974: 268) reports the use of dentalia among the Coast Salish for ear ornaments and bracelets. In Puget Sound, Eells (1985: 121) reports their use in head bands, "gorgets" and necklaces. Eells (*ibid:* 340) also witnessed a burial where ". . . guns, canoes, *Indian money and other valued articles* were placed in or near the grave" (emphasis mine). While dentalia may not have been used as a form of currency in the Gulf of Georgia region, available data seem to indicate its importance as a valuable. Since dentalia had to be imported, and since I have found no reference to it in ritual context, I consider it to be a firm indicator of wealth.

Disc beads, either of shell or ground stone, could be manufactured locally. Unlike dentalia, they cannot be taken as a direct indicator of status. Beads are documented in ethnographies as being worn as necklaces, as bracelets, or incorporated onto clothing (*see* Suttles 1974: 269; Eells 1985: 289). In their distribution within the False Narrows burial sample, it is interesting to note the tendency for an inverse association between beads and dentalia. Where there are large frequencies of beads, there are considerably fewer number of dentalia and vice versa.

Of the remainder of the artifacts identified as grave goods, there are a few that appear to be functional items. The harpoon and the nephrite celts fit these categories. Barnett (1955: 218) states that, while property was rarely interred with a corpse, ". . . if a man had been

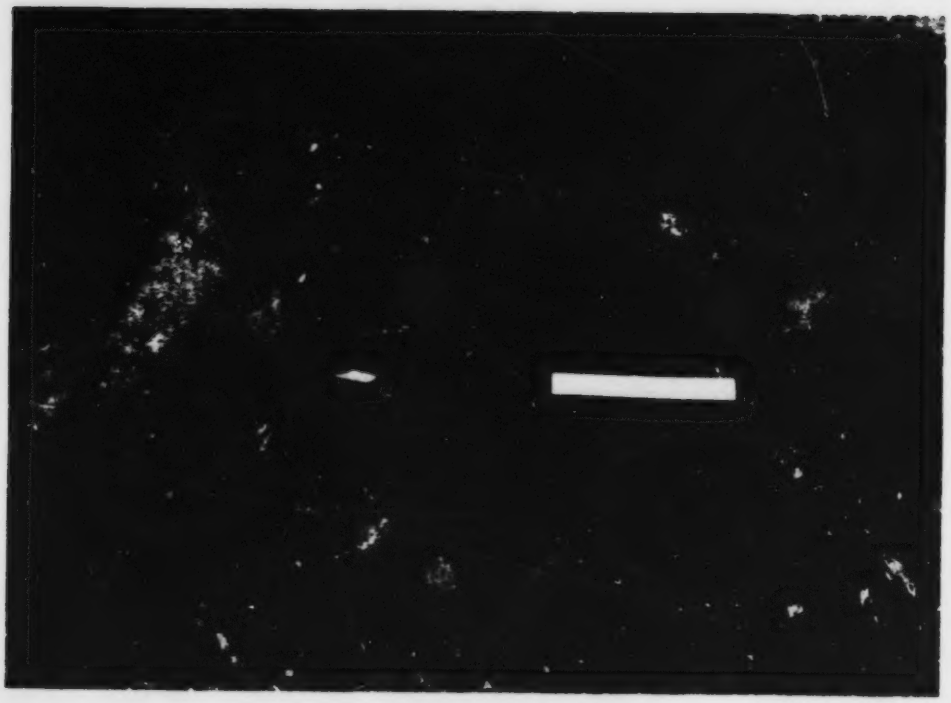

Figure 16. Burial 52.

especially fond of an article, such as a bow, or if he had expressed a wish that some possession be placed beside him, the article was deposited with his body." These items were to be used in the spirit world (*ibid.*). That the harpoon or celts might have other ritual significances cannot be ruled out.

There are three final artifact types that, based upon ethnographic analogy, may indicate wealth or ritual. These are the copper specimens, the scallop shell rattles and large lanceolate points of flaked or ground stone. Historic Northwest Coast coppers, their symbolic representation as wealth, and their role in the potlatch, are amply documented by anthropologists. Although the copper pieces associated with the False Narrows burials cannot be assumed to have had a similar significance, the rarity of copper as a raw material implies them to be status markers. Scallop shell rattles are an important component of the Coast Salish *sxwayxwey* dancer's paraphernalia. As described by Suttles (1987: 109), they were strung on a wooden hoop or pair of hoops and carried in the dancer's right hand. The presence of perforated scallop shells in an interior burial assemblage has been interpreted by Suttles (*ibid.*: 14) as a documentation of this ritual in prehistoric context. A similar conclusion might be reached for their presence at False Narrows.

Finally, long, carefully flaked, lanceolate bifaces, often manufactured of exotic materials, are a characteristic of the Marpole culture type (Burley 1980: 14). These are frequently found in association with burials, and they are suspected to have ritual function. While such specimens have no equivalent in Coast Salish ethnography, Kroeber (in Elmendorf 1974: 214) emphasizes their importance among the Yurok of northern California. Yurok "double pointed blades" were flaked from obsidian or milky chert and reached lengths of 24 or more inches. Kroeber goes on to note that "they came in pairs" and that the largest were "intertribally known" as to "their length, their appearance and their ownership" (*ibid.*). Shorter blades were also used in a "Brush dance exhibition". The flaked and ground

specimens from False Narrows, while not matching the length of Kroeber's description, are exceptionally well executed. In two burials (Burials 2 and 16), they also occur as pairs. Either as wealth or ritual goods, I have few reservations in accepting the Yurok analogy. I further interpret this class of artifacts as an indicator of status.

Based upon the preceding, I feel secure in arguing that grave goods associated with the burials at False Narrows are indicative of wealth, either in a material form (e.g., dentalia or copper) or through ritual expression (e.g., dance costume). Using the simple criterion of abundance, and my subjective impressions of value, these artifacts are used to rank the False Narrows burial sample into three groups. The first group consists of three males and a female that, in quantity, in variety and, in presumed ritual significance, stand out from the remainder. The second group includes four and possibly up to six (Burials 3a and 41) interments. This group cross cuts both sex and age grades including children as well as females. Finally, the third group includes nine individuals. In comparison to the first two classes, these burials are relatively poor. A fourth group, not identified in Table 7, incorporates the remainder of the burial population without associated artifacts. If groups one and two are taken as a unit, and group three is combined with the remainder of the burials, it is possible to argue for rank and status within the burial assemblage at False Narrows. Both of the combined categories include a demographic cross section of age and sex that I earlier stated to be a necessity.

All but three of the burials having grave good associations are assigned to the False Narrows I, Marpole culture type component; two of the remaining three are False Narrows II. The implications of this are two-fold. First, burial patterns as they relate to the interment of grave goods appear to have changed by the Gulf of Georgia culture type. Although the Gulf of Georgia sample is small, and interpretation might be prone to error, few late period burials with grave good assemblages have been documented elsewhere in the region. Secondly, and perhaps of most importance, the False Narrows I burial sample indicates a stratified social organization during the Marpole culture type. Including what I believe are upper and lower classes, this again supports interpretations for a continuity of tradition over the past 2,000 years.

CONCLUSIONS

In 1966 and 1967, archaeological excavations were conducted at the site of False Narrows on Gabriola Island. A decade later, I analysed these data as part of my Doctoral research into the Marpole culture type. This analysis was oriented toward a quantification of cultural components, and an examination of these components within a culture historical framework for the Gulf of Georgia region. My reconstruction of the Marpole culture type (Burley 1980), particularly as it relates to artifact technology, social organization and burial practices, was heavily influenced by the archaeological remains from False Narrows (also see Mitchell 1971).

The preceding volume, combined with appended artifact descriptions, is largely a presentation of site data. Details of site excavation, site stratigraphy, site features and burials are provided. In keeping with my earlier analysis, emphasis has been placed upon assemblage quantification, component delineation and culture historical comparison. These analyses indicate that four components are present at the False Narrows site. They include a mid-Marpole occupation, a late Marpole transitional component, a Gulf of Georgia culture type component and a historic Coast Salish presence. The earliest of these components is tentatively dated to 2,000 years ago based upon similarities with dated assemblages from the region. The most recent component likely post dates 1792, a year in which the Spanish explorer Galiano presented trade goods to Coast Salish people in the vicinity of Nanaimo Harbour and Gabriola Island (Wagner 1933). I believe a relatively continuous occupation occurred at the False Narrows site during the intervening period. A single radio carbon date of A.D. 240 ± 90 is associated with False Narrows II, the late Marpole transitional component.

The site at False Narrows has been identified by Rozen (1985) as the ethnographic village of Senewélets. Historically, a variety of subsistence activities was carried out from this location as documented by Jenness (n.d.) and Barnett (1955). Of those important to our understanding of Nanaimo seasonal round and possibly trade, camas and shellfish gathering are at the top of the list. The Nanaimo moved to Senewélets from their winter village sites in April/March and stayed until July. From here they crossed the Strait of Georgia to participate in the Fraser River fishery, to trade and to maintain kinship alliances. Given the close linguistic relationship between Halkomelem groups along the lower Fraser and the Nanaimo, this pattern of seasonal movement would seem to have considerable longevity. Numerous similarities between component assemblages at False Narrows and mainland sites support this assertion. Indeed, so closely do the Marpole occupations at False Narrows and Beach Grove correspond, they have been integrated into a Beach Grove variant of the Marpole culture type. This variant is defined, at least in part, through the common presence of midden interments with several having abundant inclusions of grave goods.

Data descriptions aside, the central theme of this volume has been cultural continuity for the Nanaimo Coast Salish. From the culture historical data of Senewélets, it is clear that neither an abrupt transition in people nor technology has occurred within the past 2,000 years. This interpretation is supported by archaeological research in the immediate vicinity of Nanaimo, and in the Gulf of Georgia region generally. I have further argued that continuity is present in the site specific uses of False Narrows, in regional settlement pattern for site occupants, and in the perceived importance of this site by the ancestors of the historic Nanaimo. In the latter case, the integration of False Narrows into Nanaimo mythology (Boas 1889), the long term use of the site for disposal of the dead, and the immediate presence of extensive and elaborate rock art can be taken as support.

The large number of midden burials at False Narrows is one of the few site characteristics that does not have a direct parallel in historic Coast Salish lifeways. This burial assemblage includes 50 identified interments with over 80 individuals present. However, what we can interpret from these burials continues to indicate persistence in Coast Salish cultural patterns from the Marpole period to the present. The placement of wealth items in several graves, including those of females and children, clearly indicates differential treatment of the dead. This, I argue, illustrates social organization based upon a system of ascribed ranking as found in historic Coast Salish society. In some cases, the grave goods themselves have striking

analogues in ritual paraphernalia of the historic period and may indicate further continuities in ceremonial life. Based upon the presence of a female with Chinook style cranial deformation, it has been possible to even speculate on intertribal marriage.

To conclude, I suggest the archaeological data recovered from False Narrows holds important insight for a culture history of the Gulf of Georgia region generally, and the Nanaimo specifically. My interpretations notwithstanding, I can only hope that the presentation of these data will aid future researchers in their reconstructions of regional prehistory for the past 2,000 years.

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APPENDIX A

THE FALSE NARROWS ARTIFACT ASSEMBLAGE

This appendix provides a detailed description of the analysed artifact assemblage from the False Narrows site. The principles and rationalization for the applied taxonomy are provided in earlier discussion. To reiterate, the classificatory structure is intended to facilitate comparison and it follows a format employed by Mitchell (1971) and Matson (1976). Further, in attempting to standardize description, I have applied terminology recommended by Loy and Powell (1977) for artifact analyses in British Columbia. Metric attributes are provided for attributes thought to reflect stylistic, functional or morphological variation. Frequently these are included in a tabular format with the mean, standard deviation, minimum and maximum values and sample size presented. Where metric description is found in the text, measurements from an incomplete dimension are included within parentheses. Unless otherwise stated, all measurements are in millimetres (mm), grams (g) or degrees.

FLAKED STONE ARTIFACTS

Projectile Points

Triangular Points n = 39, Figure 17: h-l

The largest projectile point category in the False Narrows assemblage is also one of the most typologically homogeneous. All specimens are manufactured from basalt; 25 have

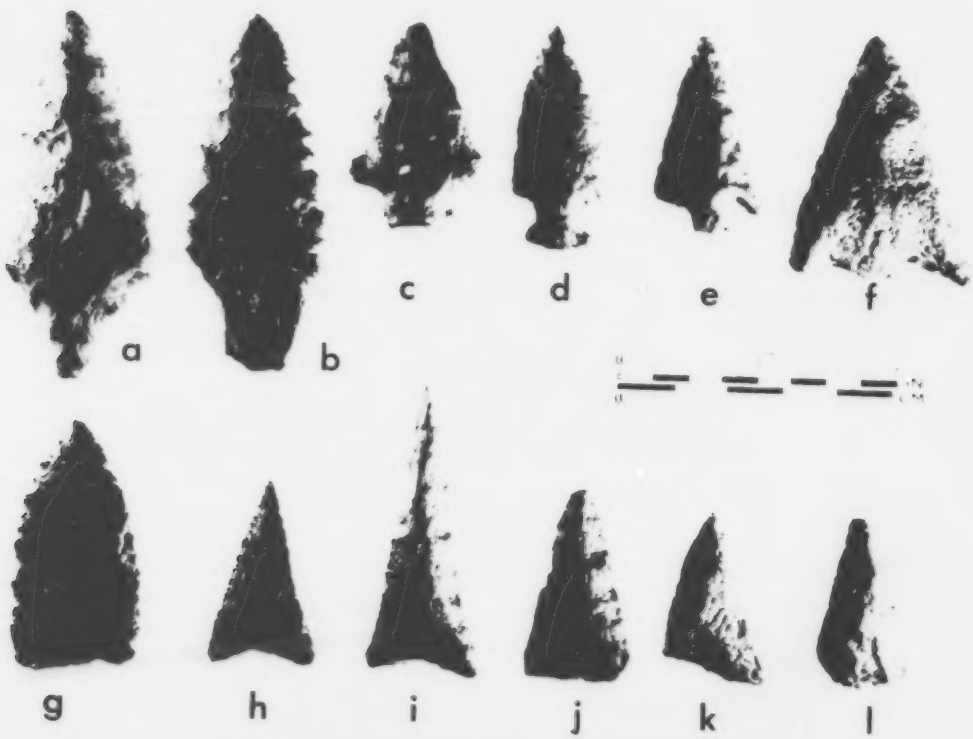


Figure 17. Flaked Stone Projectile Point Styles: a, b large contracting stem points; c small contracting stem point; d expanding stem point; e corner-notched point; f barbed/basal notch point; g excurvate point; h-l triangular points. Assigned Components: FN I, c; FN II, h; FN III, g, j, k; Other, a, b, d-f, i, l.

either a straight or straight-excurvate blade edge form, and all but five are basally thinned. In addition, 27 points are biconvex in cross section while the remainder has a biplano or plano-convex type. The only attribute with an expressed variability is basal configuration. Basal forms represented are straight (9), straight-sloped (8), convex (5), asymmetrically convex (9) and concave (8). Even within this characteristic, considerable inter-gradation was noted and further subdivision was precluded. Component assignments include FN I (5), FN II (5), FN III (4), FN IV (2) and unassigned (23).

	mean	*stnd. dev.*	*min/max*	*n*
length	36.97	9.29	25-29	33
width	22.26	4.57	17-35	39
thickness	5.90	1.55	1-9	39
weight	4.24	2.62	1.6-12.3	36

Excurvate Points n = 5, Figure 17: g

Consisting of four complete and one basal section, specimens within this category have a symmetrical excurvate form. As in the preceding class, all points are manufactured from basalt. Cross sections are biconvex while basal configuration is represented by straight (2) and concave (3). Straight bases are the only ones to have had thinning flakes removed. One extremely well made specimen has a distinctive serrated blade-edge form. Component assignments include FN I (1), FN III (1) and unassigned (3).

	mean	*stnd. dev.*	*min/max*	*n*
length	41.0	4.97	34-35	4
width	22.2	3.90	18-28	5
thickness	7.4	2.07	6-11	5
weight	6.38	1.59	4.2-7.9	4

Large Contracting Stemmed Points n = 9, Figure 17: a, b

Eight complete and one specimen with a missing tip comprise the sample. Although attribute variability tends to be high, all specimens are relatively large in comparison to other stemmed points. Six points in this category are manufactured of vitreous and granular basalt while there is one each of black and green chert. With the exception of a single plano-convex transverse section, all are biconvex. Configuration of the blade edge tends to be uniform. Seven examples have an excurvate form, one has a straight-incurvate form and one is straight-excurvate. The latter point, having an off-centre and pointed convex base, is similar in many respects to the leaf-triangular type of point described by King (1950: 16) and McMurdo (1974: 33). Base forms include symmetrically convex (2), asymmetrically convex (3) and pointed convex (4) types. Degree of shouldering is variable, intergrading between rounded and rectangular. Component assignments include FN I (1), FN III (1) and unassigned (7).

	mean	*stnd. dev.*	*min/max*	*n*
length	57.75	9.11	44-68	8
width	28.22	4.79	22-34	9
thickness	8.44	1.74	6-11	9
neck width	18.78	4.72	11-26	9
stem length	13.67	3.32	9-18	9
weight	12.86	4.96	7.5-19.1	8

Small Contracting Stemmed Points n = 5, Figure 17: c

Similar in most respects to the preceding category, specimens within this sample are less than 44 mm in length, with a tendency for a more defined rectangular shoulder. The group consists of two complete specimens, two specimens with a missing tip and one with a fragmented base. All are manufactured from basalt. Blade edge configuration could not be

determined in two cases with excurvate (2) and straight margins present on the remainder. Cross sections are almost equally represented by plano-convex (2) and biconvex (3) types. Basal forms include straight (2), convex (1), pointed convex (1) and undetermined (1). None were thinned or otherwise modified. Component assignments include FN I (1), FN II (3) and unassigned (1).

	mean	*stnd. dev.*	*min/max*	*n*
length	37.67	4.51	33-42	3
width	23.40	1.14	22-25	5
thickness	6.20	1.10	5-7	5
neck width	11.80	1.30	10-13	5
stem length	7.60	1.82	6-10	5
weight	4.53	1.30	3.2-5.8	3

Expanding Stemmed Points n = 3, Figure 17: d

All three specimens have been manufactured from granular basalt. Each also has a stem with incurvate expanding margins moving onto a defined rectangular shoulder. Two examples are complete while the third is a basal/medial section. Blade edge forms on the complete specimens are excurvate (2); a biconvex cross section is the sole type represented. Stem basal margins are either symmetrically (2) or asymmetrically (1) convex. All have been thinned. One complete specimen is 42 mm long, 22 mm wide and 7 mm thick with the neck width and stem length being 15 mm and 10 mm respectively. It has a weight of 7.5 g. The other complete example, is 50 × 23 × 8 with a 16 mm neck width and stem length and a weight of 9.2 grams. Surviving measurements for the fragment are neck width 19 mm and stem length 14 mm. The second of the complete examples has been assigned to FN II; the remaining pair are unassigned.

Corner-notched Points, n = 5, Figure 17: e

Of the five corner-notched points recovered, two are fully complete, two have portions of their base missing and the fifth is a basal fragment. Basalt (3), obsidian (1) and chalcedony (1) are the materials of manufacture. Blade edge form varies between excurvate (2), incurvate (1) and straight (1) while point cross sections are biconvex (4) or plano-convex (1). Where basal margins are fully intact, one is straight and the other is convex. Both have been thinned. All shoulder angles are acute. In the two cases where the length of the stem could be measured, both were 6 mm. Two specimens are assigned to FN III, one to FN IV, and the remaining pair are unassigned.

	mean	*stnd. dev.*	*min/max*	*n*
length	40.00	3.00	37-43	3
width	19.75	1.50	19-22	3
thickness	4.60	0.55	4-5	5
neck width	9.00	2.55	7-13	5
weight	2.48	0.46	1.9-3.0	3

Barbed/basal-notched Points n = 3, Figure 17: f

Although none of the specimens exhibit a marked distinctiveness in either the attributes of basal-notching or barbs, they are, in overall form and hafting character, similar to the barbed forms of King (1950: 14-17), Borden (1970: 102) and Carlson (1960: 570-571). Two of these points, one each of basalt and grey chert, are complete. The fragmented specimen has a portion of its base missing; it has been manufactured of basalt. Blade forms range from excurvate (1) to straight (2) with all cross sections being biconvex. Complete basal margins are symmetrically convex in form and unthinned. The hafting element for the single grey chert specimen is intermediate between a basal and corner-notched style. The complete basalt specimen has respective length, width, and thickness measurements of 45 × 34 × 8 mm. The

neck width and stem length are 12 mm and 5 mm and the specimen weighs 10.5 g. Metrics for the second example, in the same order, are 43 × 25 × 8 mm with neck width, stem length and weight respectively being 12 mm, 8 mm and 7 g. Surviving metrics for the fragmentary specimen include a width of 34 mm, a thickness of 7 mm, and a neck width of 11 mm. The fragmentary example has been assigned to False Narrows II, the remaining pair have not been assigned to a component.

Flaked Point Blanks n = 18, Figure 18: h, i

While it is possible that at least a few specimens are in a finished or near-finished state, I have interpreted the sample as a series of point preforms. In that all but one are flaked from slate, it also is probable that these preforms represent a preliminary stage in the production of ground slate points. The nonslate example is manufactured from a nephrite-like material. There are eleven complete and seven fragmented pieces within the assemblage. Intuitive classification based on identifiable outline forms suggests that triangular (5), excurvate and leaf (5), bi-triangular (2) and pentagonal (1) points may have been intended. Basal margins are convex (3), concave (3), straight (5) and pointed (2). Component assignments include FN II (4), FN III (3), FN IV (3) and unassigned (8).

	mean	*stnd. dev.*	*min/max*	*n*
length	63.73	22.24	40-105	11
width	27.78	7.33	19-49	18
thickness	5.39	1.79	3-10	18
weight	16.27	14.71	5-52.1	11

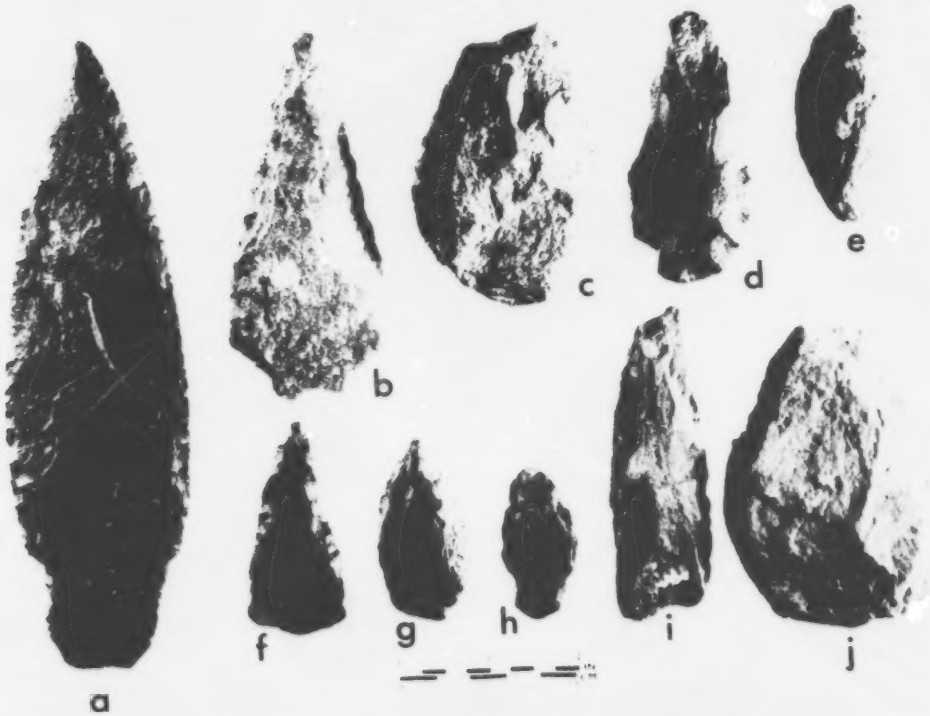


Figure 18. Flaked Stone Point Blanks and Other Bifaces: a, b large lanceolate form; c, d excurvate tear form; e leaf form; f, g triangular/ovoid form; h, i flaked point blanks; j other. Assigned Components: FN I, a; FN II, d, h; Other, b, c, e-g, i, j.

Flaked Point Fragments n = 16

Sixteen biface fragments of a size and quality similar to projectile point categories previously described were recovered. Of these, tip (11), medial (4) and basal (1) segments were present. None retained a sufficient range of diagnostic attributes for further classification. The most common material is basalt (14) although a red and a white chalcedony has also been used. On the 14 specimens where a blade edge configuration could be determined, ten were excurvate in form and the remainder straight.

OTHER FORMED BIFACES

Large Lanceolate Bifaces n = 6, Figure 18: a, b

Six specimens, five being complete, are qualitatively and quantitatively separable into a distinct lanceolate biface class. However, there are marked differences within the category and it is possible that a larger sample may lead to a different typological format. Broadly, this group may be separated into stemmed (3) and unstemmed (2) forms. Two of the stemmed and one of the unstemmed examples were incorporated as grave inclusions.

The largest of the stemmed specimens (Figure 18 a) was recovered as part of the Burial 16 grave good assemblage. Finely manufactured of basalt, this biface is 177 mm long, 52 mm wide and 10 mm thick with a weight of 112.6 g. It has a slightly contracting stem, a straight thinned base, and excurvate blade edge margins. The stem length and neck width are 30 and 36 mm respectively. The second stemmed specimen to be found with a burial (Burial 40) is finely manufactured from chalcedony. It has a large expanding stem with asymmetrical convex base and excurvate blade edge margins. The thinned base is asymmetrically convex. This point measures 110 × 39 × 8 mm with a weight of 36.6 g. The stem length is 19 mm and the neck width is 30 mm. The third complete specimen (Figure 18 b) is made from granular basalt. It has straight blade edge margins, an expanding stem and a facetted, unthinned, concave base. This specimen measures 105 × 46 × 11 mm with a weight of 51.2 g. The stem length is 17 mm and the neck width is 28 mm. The fragment, a large chalcedony midsection, might also be considered within the stemmed subclass. It has a single well made side-notch (?) and lateral blade edges that are parallel.

The two examples of the leaf shape lanceolate form are also individually unique. One, recovered from Burial 16, is finely flaked from a granular basalt. It has straight lateral margins expanding to a symmetrically convex base. This specimen measures 98 × 41 × 10 mm and has a weight of 35.5 g. The second specimen, of white chalcedony, is excurvate in overall form and has a straight well thinned base. It is 154 mm long, 50 mm wide and 10 mm thick. It has a weight of 88.7 g. The three burial associated specimens have been assigned to the False Narrows I component. The fragment occurs in deposits affiliated with False Narrows IV and the remaining pair have not been assigned to a component.

Triangular/Ovoid Shaped Bifaces n = 3, Figure 18: f, g

Including two ovoid-like and a single triangular example, these specimens share a convex base. All are made of basalt. Only one of the ovoid examples is complete; it measures 34 × 28 × 8 mm with a weight of 8.1 g. The complete example has excurvate blade edge margins with lateral angles of 50 and 55 degrees. Cross section is convex. The fragmented piece, missing a tip, has width and thickness measurements of 36 and 9 mm respectively. Again blade edge configurations are excurvate and the cross section is convex. The lateral margin angles are 40 and 55 degree. The triangular biface has a straight incurvate blade edge and a concave/convex cross section. Cortex remains on its dorsal surface. This specimen is 61 × 29 × 9 mm with a weight of 16 g. Lateral margin angles are 65 and 70 degrees. None of these specimens has been assigned to a component.

Excurvate/Tear Shaped Bifaces n = 10, Figure 18: c, d

Biface specimens of the excurvate/tear form are rather crudely flaked of granular basalt with a common excurvate blade-edge configuration. Only one specimen is fragmented although a number have been water tumbled. Basal margins are symmetrically (6) and asymmetrically (2) convex with the remainder straight. None are modified. Three of these specimens have been associated with FN II with the remainder left unassigned.

	mean	*stnd. dev.*	*min/max*	*n*
length	54.67	11.90	39-76	9
width	25.20	4.59	19-36	10
thickness	10.10	2.19	8-14	10
weight	17.12	8.06	7.6-35.5	9
lateral angle	57.50	12.41	35-75	10
tip angle	67.50	7.58	60-80	6

Leaf Shaped Bifaces n = 2, Figure 18: e

Two biface specimens, both of basalt, and both with an excurvate blade form, are included in a leaf shape category. These have a slightly more refined quality of workmanship, than those of the preceding class, and they are distinctively bipointed in style. The largest specimen measures 60 × 25 × 10 mm with a weight of 15.8 g. Lateral margin angles are 65 and 70 degrees. This specimen appears to have been water tumbled. The other leaf shaped example is 53 × 24 × 10 mm with a 12.9 g weight. It has lateral margin angles of 55 and 65 degrees. Converging lateral margins form tip and base angles in the range of 50 degrees. Neither of the bipoints could be assigned to a component.

Irregular and Other Bifaces n = 11, Figure 18: j

In addition to six biface specimens appearing to be irregular in form, five others of varied shapes were present. Included are elliptical (2), tabular, quadrilateral and discoid types. A few specimens are water rolled and two exhibit cortex on the dorsal surface. Lateral margin angles ranged between 35 and 70 degrees. None could be assigned to a component.

	mean	*stnd. dev.*	*min/max*	*n*
length	48.09	13.49	31-80	11
width	35.73	9.52	26-52	11
thickness	11.18	3.57	7-18	11
weight	21.06	13.63	10.6-60.0	11
lateral angles	52.50	8.35	35-70	20

Flaked Slate Knives/Blanks n = 39, Figure 19: a-e

A common artifact in many Gulf of Georgia region assemblages, this category may be interpreted either as flaked knives or as ground slate knife blanks. The majority appear to be roughly "blocked out" with later bifacial or unifacial edge retouch. In addition, four have one margin intentionally blunted. Outline forms include rectanguloid (16), ovoid (11), semi-lunoid (1), irregular (4) and fragmented (7). Continuous marginal retouch was present on 27, three discrete margins were worked on three, two on five, and one on four. A small number exhibit edge wear suggesting they were used as tools, as opposed to being exclusively preforms. Component associations include FN I (4), FN II (5), FN III (6), FN IV (5) and unassigned (19).

	mean	*stnd. dev.*	*min/max*	*n*
length	57.78	18.39	30-116	32
width	39.50	10.69	22-67	32
thickness	5.84	3.16	2-16	32
weight	21.35	19.44	4.4-51.6	32

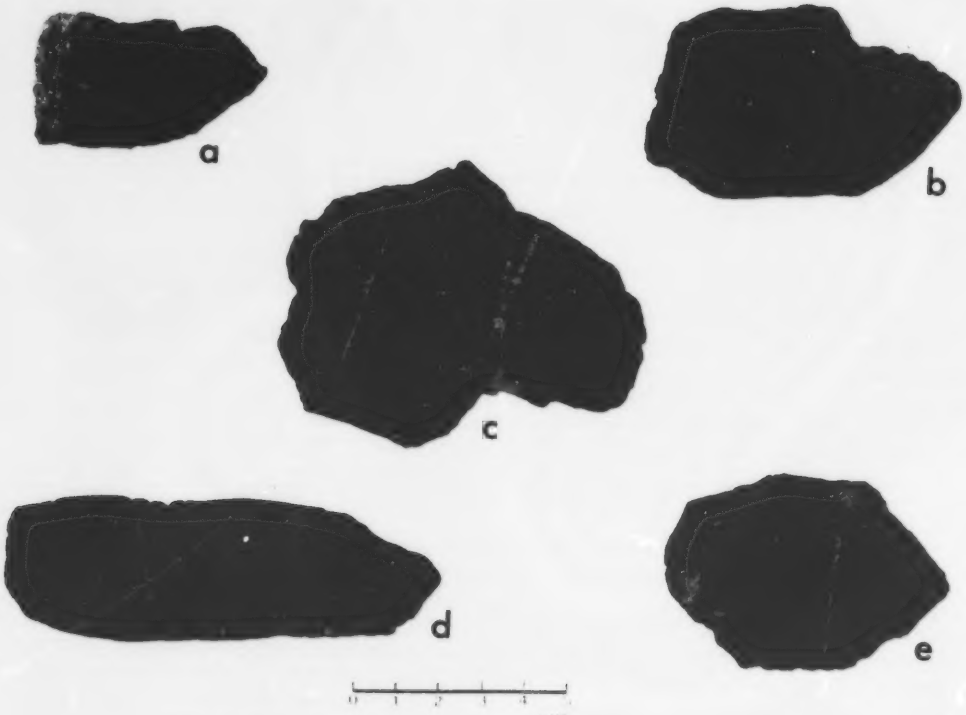


Figure 19. Flaked Slate Knives or Knife Preforms: a-e knives or knife preforms. Assigned Components: FN II, a, e; Other, b-d.

Other Formed Biface Fragments n = 28

All of these specimens have been manufactured from basalt. The sample includes nine tip, 14 body and five basal fragments. Although all are flaked, one midsection fragment has also been ground on both the dorsal and ventral surfaces. On tip segments where distal angles could be determined, the mean was 60 degrees (s = 15.81). Fifty-two lateral margin angles were taken and these provide a mean of 57.5 degrees (s = 10.17) ranging between 35 and 75 degrees. Water rolling is a characteristic for many of these specimens. Two specimens are assigned to FN I, three to FN II, one to FN III and 22 were left unassigned.

Flake Tools

Microblades n = 6

Four obsidian and two clear quartz microblades were recovered from the False Narrows excavations. Of these, all but one have distal margin breakage. This specimen, measuring 11.4 mm long, 3 mm wide and 1 mm thick was probably struck from a quartz crystal core. With such a small collection, it is impossible to determine whether the high rate of breakage is related to tool use or if it is intentional. Distal margins were neither modified nor used. All specimens have heavily scarred lateral edges with use-wear paring and crushing. Five microblades have a double arris on the dorsal surface while the other has a single ridge. Blade cross sections vary between quadrilateral (3), plano-concave (1), asymmetrical-triangular (1) and plano-convex (1). The complete microblade is the smallest within the sample. Component associations incude FN I (2), FN II (3) and unassigned (1). The following table includes only those specimens with distal breakage.

	mean	*stnd. dev.*	*min/max*	*n*
length	19.60	4.04	15-26	5
width	5.80	1.50	4-7	5
thickness	1.6	1.45	1-2	5
weight	0.20	0.10	0.1-0.3	5

Flakes with Unifacial Edge Retouch n = 104, Figure 20: a, b, d

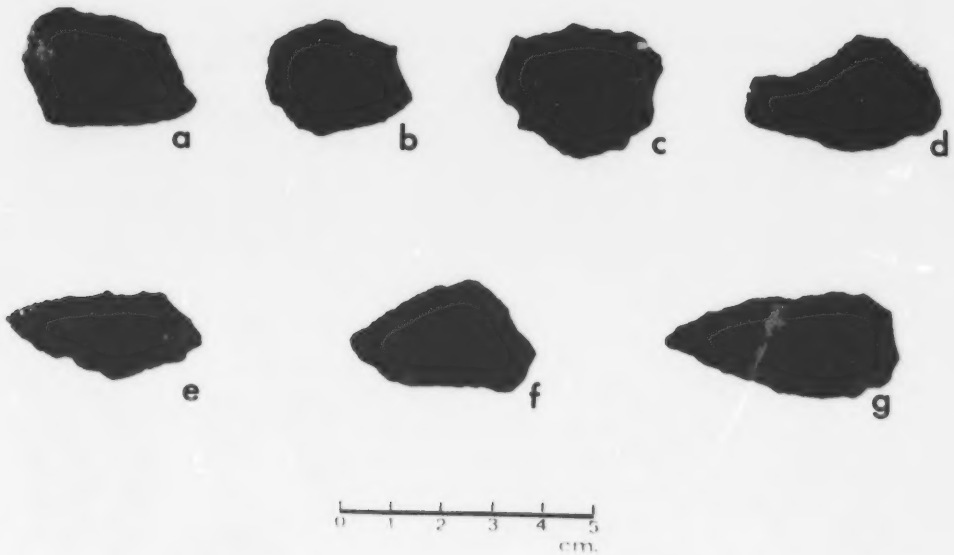
Flakes with unifacial edge retouch comprise an amorphous category including specimens of all shapes, sizes and lithic materials. The single common criterion for inclusion in the sample is an underlying flake form lacking alteration beyond unifacial retouch. I have made no distinction between use-wear retouch and retouch related to resharpening or trimming of functional margins. Even on the most pristine of specimens, it was difficult to differentiate and, considering that a large number have been water tumbled, it was felt to be an almost impossible task. For descriptive purposes, I have subdivided the sample on the basis of working margin angles. Figure 21 illustrates primary edge angle frequencies for 5 degree intervals. With angle distribution being roughly trimodal, defined subclasses include specimens with angles of 15 to 40 degrees, those having working margins of 45 to 60 degrees and specimens with angles of 65 to 80 degrees. This sample includes 11 specimens assigned to FN I, 12 to FN II, six to FN III, one to FN IV and 74 were left unassigned.

Specimens with Edge Angles of 15 to 40 Degrees n = 43 — Specimens included in this class are manufactured from basalt (29), obsidian (4), quartz (6), quartzite (1), chert (2) and a greenstone-like material (1). Primary working edge contours for the sample vary with straight (20), convex (8), concave (4) and irregular (6) forms. On 21, a striking platform and bulb of percussion is detectable. A number of pieces have at least one margin truncated or blunted, presumably for use in the hand. Twenty-three specimens have only one worked margin while the remainder have between two and four. As a rough estimate, 25 percent of the sample seems to have been intentionally retouched. The primary angle defines that edge having the greatest evidence for use; the secondary angle refers to the edge with the next most intensive use wear.

	mean	*stnd. dev.*	*min/max*	*n*
length	33.21	11.35	11-60	43
width	25.65	10.89	6-60	43
thickness	7.23	3.57	3-19	43
weight	8.10	10.26	0.3-51.8	43
primary angle	32.5	6.74	15-40	43
secondary angle	45.25	11.97	25-70	20

Specimens with Edge Angles of 45 to 60 Degrees n = 42 — Contours of the primary working edge in this class are straight (15), convex (20), concave (3) and irregular (4). Eighteen specimens have more than one worked or used edge and a small number have a margin that has been truncated or blunted. Slightly over half of the sample appears to have been intentionally modified prior to use. The majority of specimens are formed of basalt (34) with other materials including obsidian (2), quartz (5) and quartzite (1). Striking platforms and a bulb of percussion were recorded on 17 of these flake tools.

	mean	*stnd. dev.*	*min/max*	*n*
length	39.33	16.76	12-88	42
width	30.17	11.59	6-51	42
thickness	8.48	3.57	3-15	42
weight	14.00	12.84	0.4-57.2	42
primary angle	48.81	3.79	45-60	42
secondary angle	47.22	12.39	30-80	18



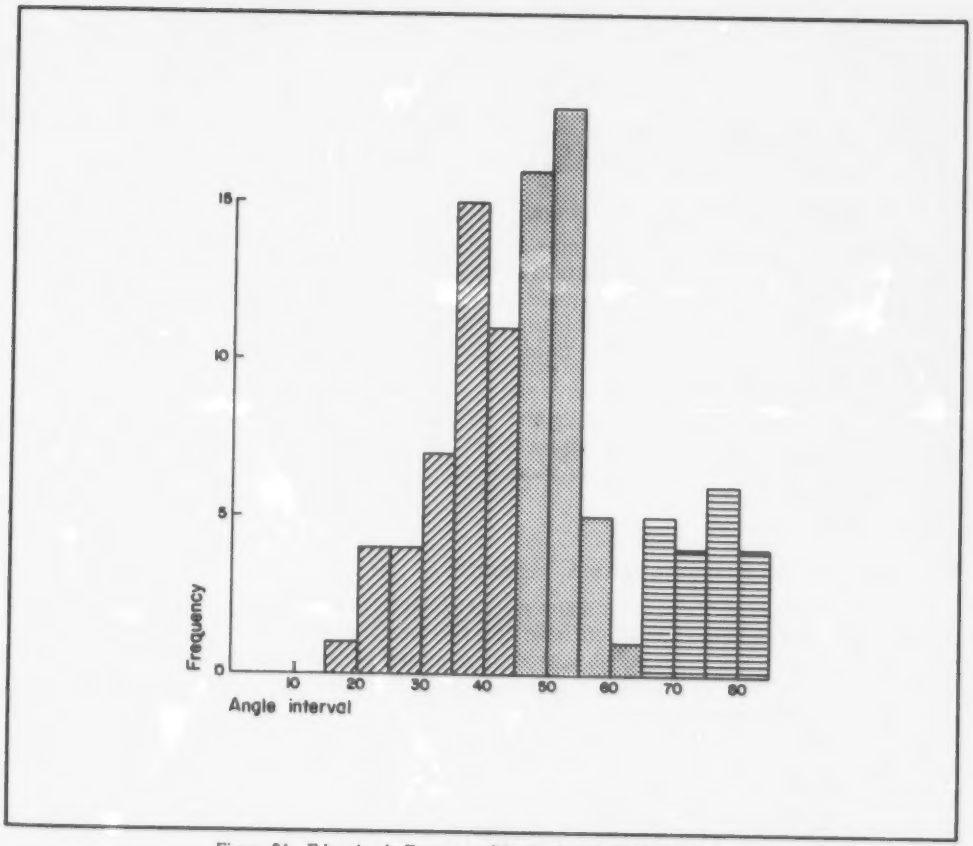


Figure 21. Edge Angle Frequency Distribution for Flake Edge Tools.

Specimens with Edge Angles of 65 to 80 Degrees n = 19 — With the exception of one obsidian specimen, all are manufactured of basalt. Ten specimens have more than a single worked or used margin. Contours of the primary worked edge are straight (11), irregular (2) and convex (6) in form. Striking platforms are noted on nine specimens and intentional retouch appears present on 11 or 12. None of these flake tools have a margin truncated or blunted for use in the hand.

	mean	*stnd. dev.*	*min/max*	*n*
length	43.11	11.46	21-60	19
width	33.53	11.17	11-49	19
thickness	10.79	4.39	5-20	19
weight	17.56	14.92	1.3-57	19
primary angle	72.37	5.62	65-80	19
secondary angle	61.5	15.99	35-80	10

Flakes with Bifacial Retouch n = 8, Figure 20: e, f

This class includes flakes having bifacially retouched working margins. All eight of the specimens have two worked margins while four have three or more. In all cases, the bifacial retouch associated with the primary margin is regular and patterned. On two implements, secondary margins have unifacial flaking. Surface cortex is present on two pieces while two others are water tumbled. None of these specimens are assigned to a component.

	mean	*stnd. dev.*	*min/max*	*n*
length	36.13	13.98	27-69	8
width	25.88	10.05	18-50	8
thickness	6.00	1.20	4-8	8
weight	8.18	10.22	3.2-33.2	8
primary angle	46.25	17.06	20-70	8
secondary angle	53.85	9.16	35-65	8

Single Tip Flake Gravers n = 9, Figure 20: g

Possessing a single sharp tip, nine basalt specimens are tentatively assigned to a functional category of single tip gravers. The tip on seven specimens is pyramidal in shape, one has a beaked tip and the final example has a tip that is plano-convex in planar view. All exhibit varying quantities of identifiable tip polish. Tip wear on two examples suggests they may have been employed in a drill-like fashion. Component assignments include FN I (2), FN II (1) and unassigned (6).

	mean	*stnd. dev.*	*min/max*	*n*
length	34.67	7.16	25-45	9
width	24.78	5.07	16-31	9
thickness	7.56	1.88	6-12	9
weight	6.48	2.17	2.8-9.7	9

Multiple Tip Flake Gravers n = 5, Figure 20: c

Five basalt flakes have graver spurs placed along lateral margins in a denticulate-like fashion. One specimen has five identifiable tips, two have four projections and the remainder have two and three. Use-wear polish is evident on most tips. With one exception, additional unifacial or marginal use retouch is also present. Only one specimen could be assigned to a cultural component, it being FN III.

	mean	*stnd. dev.*	*min/max*	*n*
length	33.40	4.72	30-41	5
width	26.40	5.18	20-32	5
thickness	6.40	2.79	4-11	5
weight	5.8	3.74	2.5-11.6	5

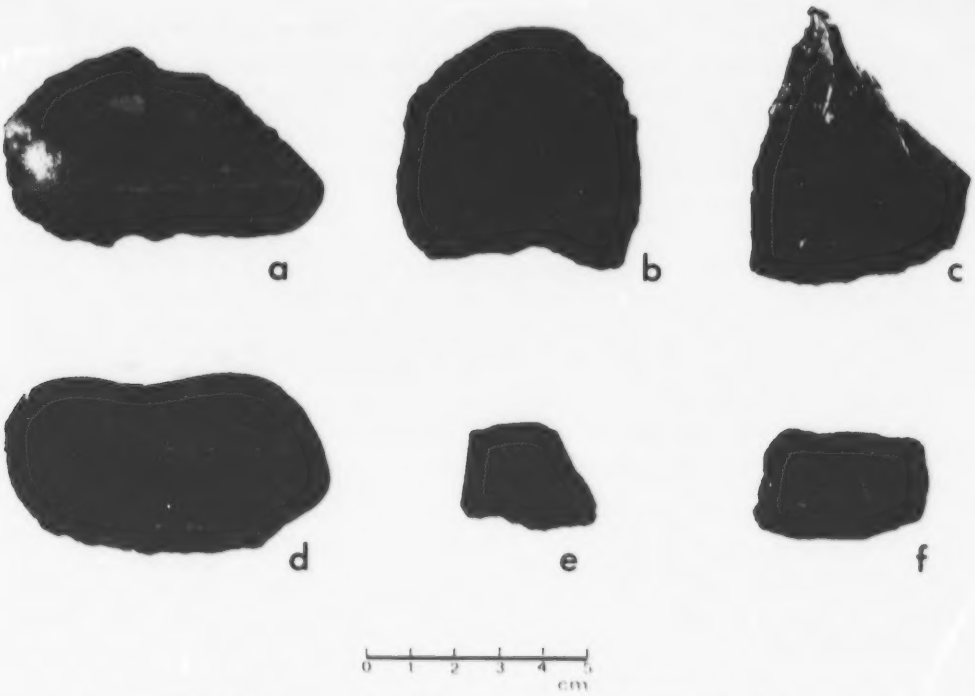


Figure 22. Cobble/Core Tools: a cortex spall tool; b, c core tools; d modified cobble tool; e, f *pièces esquillées*; Assigned Components: FN I, d; FN II, c, e; Other, a, b, f.

Cobble/Core Tools

Pièces esquillées n = 10, Figure 22: e, f

Of the ten pièces esquillées, five are basalt, four are quartz and one is quartzite. Pièces esquillées are bipolar battered specimens believed to have been used in the sectioning of antler or bone. Nine within the present sample are felt to be complete. Six have been formed on flakes with crushed opposing lateral margins. The remainder are a biface fragment, a flaked stone tabular form and an irregular block. In no case does the crushing appear to be related to flake removal in core reduction. Component associations include FN I (2), FN II (5) and unassigned (3).

	mean	*stnd. dev.*	*min/max*	*n*
length	33.89	6.60	22-42	9
width	22.33	6.52	14-37	9
thickness	8.40	1.43	6-11	10
weight	7.99	4.51	3.8-17.0	9

Cortex Spall Tools n = 7, Figure 22: a

Seven cortical spalls, each with varying amounts of edge retouch, have been flaked from basalt cobbles. All dorsal surfaces have greater than 50 percent cortex while a crushed striking platform was recorded on two. The largest specimen (122 × 98 × 26 mm), judging from the crushed margin, may have been employed as a chopping tool. It weighs 253.6 g. Assigned components include FN I (1), FN III (1) and unassigned (5).

	mean	*stnd. dev.*	*min/max*	*n*
length	72.14	24.29	52-122	7
width	52.86	22.83	35-98	7
thickness	13.71	5.74	9-26	7
weight	69.39	81.58	33.7-253.6	7

Core Tools n = 10, Figure 22: b, c

This category refers to a series of large edge prepared tools based on cores or core remnants. Although the majority are thought to have had a cobble for a parent source, only three have cortex remaining intact. Predominant edge modification is unifacial while bifacial flaking is present on two pieces. Use-wear striations and paring, as well as light crushing, suggest a multipurpose chopping/scraping function for the sample. Nine specimens are basalt and the other is manufactured of obsidian. The modal number of flake scars on underlying cores is five with a minimum of three and a maximum of nine. These core tools are irregular in shape. One specimen is assigned to FN I, three to FN II and six are unassigned.

	mean	*stnd. dev.*	*min/max*	*n*
length	64.60	19.43	55-91	10
width	41.90	10.90	25-59	10
thickness	17.50	3.60	11-21	10
weight	55.95	35.67	12.9-115.8	10

Modified Cobble Tools n = 4, Figure 22: d

Single cobbles of andesite and quartzite and two of basalt have been modified into chopper/chopping implements. Two specimens have three large flakes detached from the distal end while a third piece has four flakes removed. The remaining implement is a split cobble with a single large flake struck from the exposed face. Light to heavy use-wear and crushing is observed on three; secondary retouch is present on one. With the exception of the prepared face, remaining surface areas are cortex. Only one specimen is assigned to a component, that being FN I.

	mean	*stnd. dev.*	*min/max*	*n*
length	103.25	27.90	74-141	4
width	87.00	31.38	40-105	4
thickness	51.50	23.30	24-81	4
weight	837.40	780.45	99.6-1925	4

DEBITAGE/MISCELLANEOUS

Miscellaneous Flaked Stone Artifacts n = 7

Five relatively large slate slabs with at least one flaked margin, a flaked nephrite cobble, and a basalt cobble with two large flakes detached are included in the miscellaneous category. The slate slabs vary in size and form although it is possible that four of these may simply be larger versions of the earlier described flaked stone knives or blanks. The fifth slate specimen, in addition to flaked edges, has a notch (32 × 22 mm) along its lateral margin. Specimens range in size from 203 × 128 × 25 mm to 68 × 67 × 8 mm. The nephrite cobble (133 × 78 × 34 mm) weighs 407 g and has a number of flakes struck from the dorsal margin. On the flat ventral face, cortex predominates. Although it is impossible to infer function, it may represent a blank for the manufacture of a nephrite celt. Finally, the basalt cobble (96 × 73 × 48 mm) has two large flakes detached from one end. This cobble appears to have been in the initial trimming stage of core reduction. It weighs 448 g. Specimens have been associated with FN I (1), FN III (1) and left unassigned (5).

Flaked Stone Cores n = 42

During site excavations, lithic debitage was bagged by level, by unit. Although I have not examined these level materials for reasons outlined earlier, a sample of cores was accessioned into the catalogue record and analysed as part of the formed tool assemblage. Within this sample, bipolar cores predominate (20) although several other types are present. Component assignments for the core sample are FN I (7), FN II (5), FN III (4), FN IV (1) and unassigned (25).

Bipolar cores are identified on the basis of crushed and battered striking platforms with similar opposing margins. These attributes are the result of the core being placed on an anvil stone and struck with a hard hammer. For analytical purposes, Binford and Quimby (1963) suggest bipolar cores are divisible into several production (exhaustion) stages. These are defined by the attribute modifiers of ridge, area and point in the description of overall form. At False Narrows, in terms of Binford and Quimby's classes, there are opposing ridge (7), ridge-area (10), area-point (2) and opposing area (1) types. Most specimens exhibit more than one set of crushed margins. The most frequent platform location is formed on a natural cortex surface. Fourteen basalt, two obsidian and four quartz specimens were recovered. Bipolar core sizes are highly varied with the largest specimen being a basalt piece measuring $64 \times 42 \times 13$ mm and the smallest a $23 \times 18 \times 8$ mm quartz example. Bipolar cores, as a whole, range in weight between 2.3 and 69.9 g with a mean of 29.4 g. Specimens have between 3 and 8 flake scars present.

The remaining 22 cores are an amorphous sample of worked and split cobbles (5), specimens with a bifacially prepared edge (4), shatter or block fragments (2), irregular pieces (5) and core remnants or fragments (6). Basalt is the most predominant lithic type (18) with quartz (3) and an unidentified igneous extrusive material also present. With the exception of the bifacial specimens, flake detachment follows no regular pattern for the sample. However, intentionally prepared platforms are present on several. Number of flake scars ranges from 3 to 11 with a mean of 5.38. The largest specimen ($136 \times 103 \times 60$), an irregular basalt piece, weighs 705 g. One of the smallest is a piece of quartz shatter ($33 \times 29 \times 21$) having a weight of 26.1 g.

GROUND STONE ARTIFACTS

Ground Stone Points

Triangular Points n = 9, Figure 23: a, f

The triangular ground slate point sample has a straight blade edge configuration with a straight to asymmetrical convex base form. Blade edge sharpening tends to be uniform with seven being double beveled, one double tapered and one with a combination of beveling and tapering. Base forms include five with straight margins, three that are convex and one is irregular. Basal margins on four points are ground thin and four others are blunted either by flaking, grinding or a combination of flaking and grinding. Cross sections are biplano (8) and biconvex (1). All specimens are manufactured from grey slate. While the total triangular sample has the diagnostic basal segment, only three specimens are fully complete. Assigned components include FN II (1), FN III (2), FN IV (1) and unassigned (5).

	mean	*stnd. dev.*	*min/max*	*n*
length	41.33	7.23	33-45	3
width	20.22	4.32	14-25	9
thickness	2.56	0.53	2-3	9
weight	2.00	1.82	0.8-4.1	3

Rhomboidal Points n = 2, Figure 23: h

The rhomboidal form is characterized by four straight sides at which the bisection of adjacent margins forms two symmetric triangles. Both False Narrows specimens have a

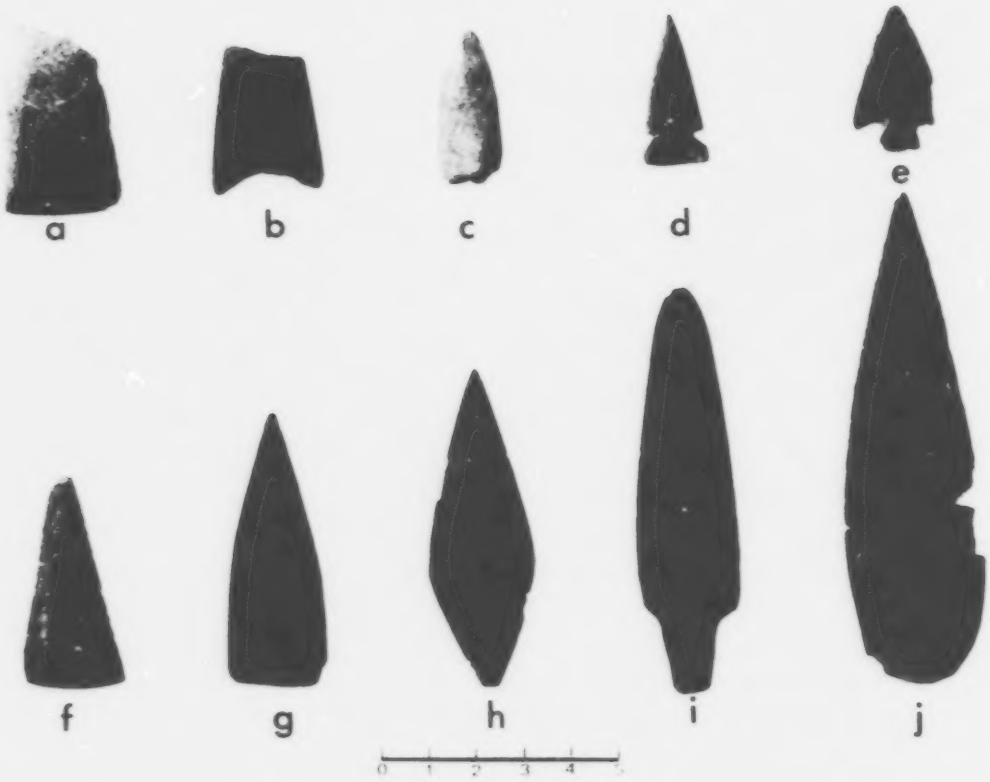


Figure 23. Ground Stone Points: a, f triangular points; b eared concave base point; c, g excurvate point; d, e notched points; h rhomboidal point; i stemmed point; j tear shaped point. Assigned Components: FN I, i; FN II, c, j; FN III, a, f; Other, b, d, e, g, h.

double beveled blade edge preparation on the distal margins with proximal edges and apex ground blunt. Cross sections are biplano and, in both cases, lithic material is grey slate. One specimen measures 66 × 22 × 4 mm with a 6.9 g weight. The other has a weight of 5.79 g and measurements of 57 × 21 × 3 mm. Only the first could be assigned to a component, namely FN IV.

Tear Shape Points n = 10, Figure 23: j

Tear shaped points have an excurvate blade form which moves onto a convex base. Maximum point width generally falls below the base to tip midline. Seven complete, two basal/medial sections and an unfinished piece, all of grey slate, comprise the sample. Lateral margin preparation is double tapered (6), double beveled (3) and one bevel/taper combination. Bases on four points are tapered thin and five more, through a combination of grinding and flaking, are blunted. A single base is incomplete. Seven cross sections are biconvex and three are biplano. Had size criteria been included as discriminating attributes, two points could be segregated as a separate class. This includes a complete specimen measuring 120 × 29 × 3 mm as well as an unfinished example ([85] × 32 × 3). Component assignments include FN II (7), FN III (1) and unassigned (2).

	mean	*stnd. dev.*	*min/max*	*n*
length	60.43	27.82	36-120	7
width	22.80	4.02	19-32	10
thickness	3.20	1.32	2-6	10
weight	6.01	2.35	3-10	7

Excurvate Points n = 15, Figure 23: c, g

Specimens within this sample have an excurvate blade configuration with straight to straight-slanted bases. Lateral margin preparation has seven specimens exhibiting double bevel edges, six with double taper and one each of a single bevel and bevel/taper format. Basal margins on seven of these points have been ground thin (both beveled and tapered) and five others are blunted through flaking and/or grinding. Cross sections are evenly split between biplano (8) and biconvex (7). Although slate is again the primary lithic material employed (12), three specimens were manufactured from other compact sedimentary materials. Only eight excurvate points are fully complete. Specimens have been assigned to FN I (1), FN II (3), FN III (3), FN IV (1); seven are left unassigned.

	mean	*stnd. dev.*	*min/max*	*n*
length	53.88	10.40	33-63	8
width	18.93	3.95	12-25	15
thickness	3.07	0.96	2-5	15
weight	4.41	1.44	2-7.5	9

Eared/Concave Base Points n = 3, Figure 23: b

All specimens have the diagnostic criteria of concave base with sharp ear-like barbs forming basal tips. In addition, all have double beveled blade edge preparations, straight lateral margins, biplano cross sections and they are manufactured of grey slate. The only complete specimen (37 × 23 × 2 mm) weighs 2.0 g. One fragmentary example ([32] × 24 × 3) is missing a tip while the other (82 × [25] × 4) has a split base. The distance between basal edge and midpoint of the basal indentation ranges between 3 and 10 mm. The complete point has been assigned to FN III with the remaining pair lacking secure provenience.

Stemmed Points n = 3, Figure 23: i

The stemmed point class is defined by an excurvate blade edge configuration and a straight sided contracting stem. The largest specimen (83 × 21 × 8), is manufactured of grey slate. It has a hexagonal cross section and blade edge margins that are double beveled. The stem length is 16 mm, neck width is 13 mm and weight is 18 g. The second stemmed point (50 × 28 × 5), of light brown slate, has been both flaked and ground. With a stem length of 9 mm and a neck width of 14 mm, this specimen weighs 7 g. The final stemmed point (55 × 29 × 7), having a biconvex cross section, is manufactured of a grey siltstone. Both stem margins, as well as the base, have been ground blunt. For this point, stem length is 15 mm, neck width is 17 mm and weight is 12.6 g. The first specimen has been assigned to FN I, the second FN III and the third has an uncertain component affiliation.

Notched Points n = 3, Figure 23: d, e

Two side-notched points and a corner-notched example are included within the ground point category. All three are manufactured of grey slate and have straight blade edge margins. Of the side-notched points, one (32 × 14 × 2) has a double beveled blade edge preparation and a biplano cross section. The stem length is 7 mm, neck width is 9 mm and weight is 1.2 g. The other side notched example (36 × 16 × 4) has part of the base missing. Blade edge margins are double tapered and the cross section is biconvex. With a stem length of 8 mm, this specimen has been water tumbled. Finally, the corner-notched point (31 × [18] × 2) has a double beveled edge preparation and a biplano cross section. The base is tapered straight and the stem is expanding with ground notches. A portion of the shoulder is missing. Stem length and neck width are 6 and 8 mm respectively. None of the three notched points were assigned to a component.

Lanceolate Points n = 6, Figure 24: a-c, e

Although generally categorized as a large lanceolate form, the six specimens fall into two distinct classes - a large well made bayonet type and other large points. The bayonet-like points are homogeneous in form and quantitative attributes. All three are rhomboidal in cross

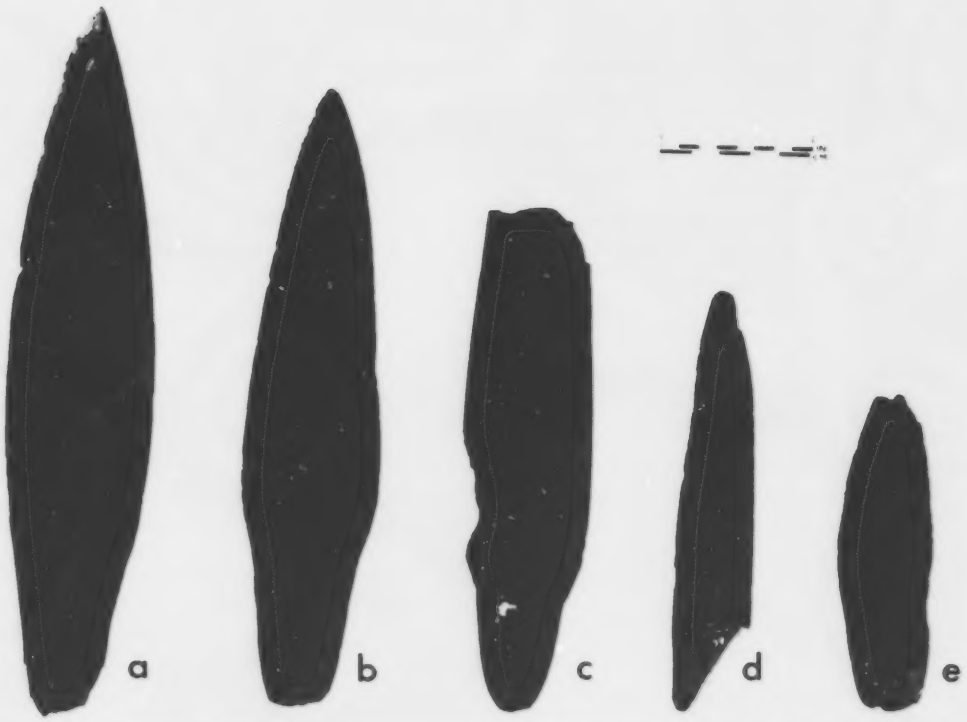


Figure 24. Ground Lanceolate Points: a-e lanceolate points. Assigned Components: FN I, a, b, d; FN II, e; Other, c.

section and include a distinctive medial ridge running along the longitudinal axis. Blade edges are excurvate in form and double tapered. All are made from grey slate. Two of these points were recovered from a burial context (Burial 2). The largest (Figure 24 a) measures 233 × 47 × 11 mm and has a weight of 148.5 g. This specimen has poorly defined shoulders with stem margins that are ground flat for a length of 56 mm from the basal edge. The second of the burial associated examples (Figure 24 b) measures 205 × 45 × 10 mm with a weight of 112.8 g. It has slight shouldering and a stem that contracts to a convex base. As with the preceding example, stem margins have been ground. Stem length is 54 mm and neck width is 38 mm. The third stemmed example (Figure 24 c), though not as well made, has a well defined stem that is almost pointed convex along the basal margin. Stem margins and base have been ground flat. Broken at the distal end, this specimen measures (168) × 43 × 12 mm. It has a stem length of 42 mm, a neck width of 29 mm and a weight of (103.2) g. The initial pair of stemmed points are associated with False Narrows I while the last specimen has not been assigned to a component.

The remaining three points, none of which is complete, are manufactured of grey slate. All have an excurvate blade form. One (Figure 24 e) has a slightly defined stem and seems to be a smaller version of the bayonet-like point just described. It measures (108) × 32 × 7 mm and has a weight of 37.3 g. Stem margins are ground blunt and contract slightly to a straight blunt basal edge. Neck width is 27 mm and the stem length is 29 mm. Blade edge modification is double tapered. This point has been assigned to FN II. The two remaining points, both of an excurvate variety, are less well made and smaller. One ([79] × 30 × 9 mm) may be unfinished. Its irregular base is flaked while lateral margins are double tapered. Cross section is biconvex. The other specimen ([83] × 27 × 6 mm) has a straight ground base, a biplano cross section and a double bevel blade edge preparation. Respectively, the latter points have been associated with FN I and FN IV component assemblages.

Fragments n = 25, Figure 24: d

Three groups of ground point fragments, all manufactured of grey slate, are present. This includes tip fragments from small ground points (12), midsection fragments from the same sample (6) and assorted fragments of much larger specimens (7). Of the tip fragments, eight have a straight blade form and the remainder are excurvate. Blade edge preparation is varied with double bevel (5), double taper (3) and a combination of beveling and tapering (4) represented. A biplano cross section (9) is the predominant type with three being biconvex. Tip fragments have a mean thickness of 2.67 mm (s = 0.65). The six body fragments closely correspond to the above described tip sample. Three are double tapered along the lateral margins with the others double beveled. Cross sections are split between biconvex (3) and biplano (3). Blade forms are excurvate (4) and straight (2). Mean thickness for body fragments is 2.80 mm (s = 0.84). Finally, the collection of large point fragments appear related to the lanceolate class. The sample consists of two possible stems and five tip and body sections. The stems have lateral margins ground flat with the basal edge straight on one, and convex on the other. Tip and body pieces are largely excurvate in form and double beveled in blade edge modification. Two specimens are rounded blunt along the cutting edges. Mean thickness for the large fragment assemblage is 7.57 mm (s = 1.51). Component associations for the ground point fragment class are FN I (1), FN II (3), FN III (6), FN IV (2) and unassigned (13).

Ground Stone Knives

Thin Small Knives n = 6, Figure 25: c, d

With one exception, the six specimens within this category comprise the only complete examples of back hafted ground stone knives in the assemblage. This sample characteristically is small with a general rectanguloid shape; one specimen is semi-lunoid. All specimens have a single prepared cutting edge that is double tapered (2) or double beveled (4). One has all other margins ground blunt, three have other margins flaked and the remaining two have flaked end margins and a ground back. Two of these knives appear to be reworked fragments of a larger form. All specimens have distinguishable use-wear. Grey slate is the sole lithic material represented. None have been assigned to a component.

	mean	*stnd. dev.*	*min/max*	*n*
length	55.60	8.78	40-65	6
width	40.33	8.91	33-57	6
thickness	3.67	0.52	3-4	6
weight	13.98	3.71	9-20	6
working angle	40.00	10.00	25-50	6

Thin Large Knives n = 17, Figure 25: b

Although this sample includes only one complete specimen, several fragments are larger than the preceding category allowing them to be separated as a distinct form. The complete implement, measuring 95 × 36 × 7 mm and weighing 40.7 g, is rectanguloid. Its single taper cutting edge has a 20 degree angle with the opposing back margin sawn and snapped. End margins are also ground blunt. Maximum thickness was taken along the back sawn edge which seemed unfinished. This specimen could not be assigned to a site component.

The remainder of the sample consists of relatively complete implements with fragmented ends or, at a minimum, halves of the original form. Inferred shapes for the collection include rectanguloid (5) and semi-lunoid (9) with forms for two specimens undetermined. The primary cutting edge varies between double tapered (7), double beveled (7) and single tapered (2). One of the single tapered implements was also flaked along this margin. Flaked backs were present on seven knives, four had ground margins opposed to the cutting edge and three were either broken or sawn. A beveled back was noted on two specimens. All but one

Figure 25. Ground Knives: a, miscellaneous ground knife; b thin large knife; c, d thin small knives; e, f end hafted knives. Assigned Components: FN II, e; FN III, a; FN IV, f; Other, b-d.

implement was manufactured from slate, the exception being an unidentified compact sedimentary material. Component associations for these large fragments include FN I (1), FN II (1), FN III (1), FN IV (4) and unassigned (10).

	mean	*stnd. dev.*	*min/max*	*n*
length	72.31	12.24	56-105	17
width	49.44	9.85	40-65	17
thickness	4.00	1.15	3-7	17
weight	22.66	8.82	9.4-44.4	17
working angle	37.87	9.12	15-55	17

End Hafted Knives n = 6, Figure 25: e, f

Six ground slate specimens have what appear to be a hafting element situated on one end. This includes three with a stem, one that is notched on its lateral margin and two others that have lateral margins ground blunt on the assumed hafted portion. General outline shapes are rectangular (2), elliptical (2) and irregular (2). All but one implement have opposed cutting margins which are double tapered or double beveled. The exception includes a single worked edge which is both tapered and beveled. The distal end in three cases is straight or straight-slanted, on one it is pointed convex, on another convex, and the remaining piece is irregular. Of the stemmed implements, two have had stem margins ground flat while a third has the

entire stem area thinned by flaking. Slate is the sole lithic material employed. Only four of these knives are complete. Specimens have been associated to FN II (1), FN III (1), FN IV (2) or left unassigned (2).

	mean	*stnd. dev.*	*min/max*	*n*
length	67.25	9.18	57-75	4
width	20.60	3.13	16-24	5
thickness	3.50	0.84	2-4	6
weight	10.60	2.45	8.5-13.9	4
working angles	41.36	12.27	30-60	11

Miscellaneous Ground Stone Knives n = 5, Figure 25: a

Five specimens do not readily fit preceding classes, nor do they share common attributes among themselves. Three of these knives have been manufactured of slate and, while appearing to be complete, have no form other than a modification of the cutting edge. Included here is a roughly triangular specimen having steep single bevel lateral margins and a spatulate-like tip, a piece with a double beveled cutting margin isolated on a butter knife-like tip, and a long thin slate segment with adjacent double tapered margins and a blunted backing. The remaining two pieces may not be knives. One is based on a compacted sedimentary cobble that has a single ground face intersecting with a flat abraded ventral surface at an angle of 80 degrees. The second implement is an andesite (?) flake which has been intentionally ground along one of its convex margins. Tapering to this edge, the angle which has resulted measures 30 degrees. Three of these knives are associated with FN III while the remaining two could not be assigned to a component.

	mean	*stnd. dev.*	*min/max*	*n*
length	68.20	18.10	42-92	5
width	33.80	14.65	17-56	5
thickness	12.20	7.85	4-23	5
weight	37.52	46.33	6.2-118	5
working angles	42.14	21.19	20-80	7

Ground Knife Fragments n = 150

One hundred and fifty pieces have been identified as ground knife fragments although only 62 retain a distinguishable cutting edge. Of the latter, 43 are double beveled, nine are double tapered, seven are single tapered and three are tapered-beveled. Only two specimens had more than one prepared edge, and both were adjacent. Varying qualities and colours of slate were employed as the manufacturing material for a vast majority of specimens. Three fragments were of compacted siltstone and another of greenstone. Many of the 88 pieces not having a worked edge were exfoliated sections. The mean thickness for the sample is 3.12 mm (s = 0.93) ranging between 2 and 6 m. Where the working edge angle could be measured, it ranged between 25 and 60 degrees with a mean of 39.11 (s = 8.66). Associated components include FN I (5), FN II (20), FN III (26), FN IV (23) and unassigned (76).

Celts/Adze Blades

Single Bevel Adzes n = 7, Figure 26: e, g

Having a steep single beveled bit element, these specimens appear analogous in form to the modern adze. Ventral surfaces of the working margin are either lightly beveled or tapered. The bit horizontal form is symmetrically convex in four cases and straight for the remainder. Bit use-wear is noticeably heavy on two specimens and light on three. At least one piece has been resharpened. In all cases, maximum width occurs on the bit. Poll horizontal views are straight (2), symmetrically convex (2) or asymmetrically convex (3) with cross sections being rectangular (3), biconvex (2) or plano-convex (1). On two specimens, polls are heavily pitted and a third has been fractured. Lateral margins were ground flat (4) although these had been

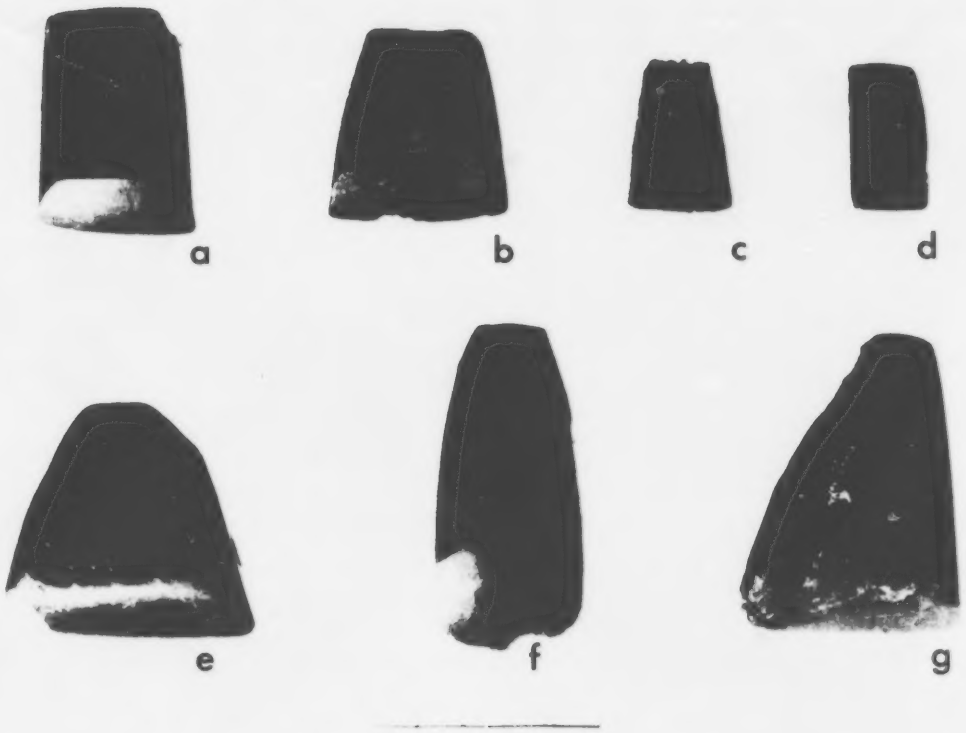


Figure 26. Celts/Adze Blades: a-c double bevel celts/adzes; d, f double taper celts/adzes; e, g single bevel adzes. Assigned Components: FN I, d, g; FN III, f, e; Other, a-c.

tapered on one and on another, flaked blunt. One implement has been fractured longitudinally. Lithic materials employed in the manufacture of these tools intergrade between nephrite and serpentine. One specimen is associated with FN I, one with FN III, and the remainder have not been assigned to a component.

	mean	*stnd. dev.*	*min/max*	*n*
length	68.14	25.96	45-124	7
width	49.75	4.27	45-55	4
thickness	13.71	1.70	12-16	7
weight	59.35	8.03	50.67	4
bit angle	57.85	9.06	50-75	7

Double Bevel Celts/Adzes n = 13, Figure 26: a-c

Although distinguishing between double beveled and double tapered celts might be questioned, the difference in bit preparation results in different angle modes which may be associated with different functions. On 12 of the 13 examples, light to heavy use wear is present on the bit. Bit horizontal forms are straight in eight cases with the remainder either convex or asymmetrically convex. Maximum width was found to be along the bit margin. Polls are homogeneous in cross section with the sole form being rectangular. Four polls had indications of battering and three others had been fractured. Poll horizontal views were either

straight (6) or convex (5). Lateral margins on two celts are beveled on one edge and flat on the other. The remaining implements had margins either ground flat (7) or rounded. As in the previous grouping, the predominant lithic material is nephrite that intergrades with a serpentine. One exception has been made of basalt. Component associations include FN I (1), FN II (2), FN III (1), FN IV (1) and unassigned (8).

	mean	*stnd. dev.*	*min/max*	*n*
length	42.30	9.07	30-54	10
width	32.85	6.24	21-40	13
thickness	13.77	2.55	9-18	13
weight	38.25	14.44	20.9-70	10
bit angle	62.31	8.57	50-75	13

Double Tapered Celts/Adzes n = 7, Figure 26: d, f

Only three of the double tapered celts are fully complete with the remainder having fractured polls. The complete polls are straight in horizontal view and rectangular (2) or round (1) in cross section. Two have notable battering. Bits vary in form between straight (5) and convex (2) in planar view. All have heavy to light use-wear. Maximum width occurs along the bit edge. Lateral margins have been ground flat with a single rounded exception. On two implements, saw incisions on the dorsal face may have served as a hafting aid. Raw materials were nephrite or a closely related variation. One double tapered celt has been burned, though this is probably a post-use occurrence. Two specimens have been associated with FN I, one each is assigned to FN II and FN III and the remainder are left unassigned.

	mean	*stnd. dev.*	*min/max*	*n*
length	49.67	20.40	32-72	3
width	29.00	8.12	17-35	4
thickness	12.14	3.58	7-16	7
weight	28.03	23.91	18-64.5	3
bit angle	48.57	9.00	35-60	7

Miscellaneous Celt/Adze Fragments, n = 15

Five poll elements, six body fragments and four unfinished specimens compose the fragment sample. All materials are nephrite. Poll sections are both straight (2) and convex (3) in horizontal view with a rectangular (3), biconvex (1) or plano-convex cross section. Lateral margins are predominantly ground flat with one specimen having rounded edges. The mean poll thickness is 13.20 mm (s = 2.95). Body fragments, for the most part, are exfoliated pieces with no diagnostic characteristics. One specimen includes a portion of the bit which appears to have been double tapered with a 45 degree angle. On three cases where a single lateral margin remained intact, it was found to be tapered (1) or rounded (2).

The four unfinished pieces include two that were being remanufactured from larger specimens and two others appear to have been abandoned prior to their completion. One of the reworked pieces is a sawn longitudinal section including a bit segment with an approximate angle of 50 degrees. Bit type could not be determined. The other has been only partially sawn along the longitudinal axis. It is based on a former single beveled specimen (40 degree angle) which had both a fractured bit and poll. In both of the remaining unfinished pieces, polls have not been modified. On one, the bit appears to have fractured in the manufacturing stage. The second specimen has a single beveled bit with a 55 degree working angle. The ventral face of this specimen has not been modified. Lengths for these pieces range between 39 and 83mm with weights varying between 11.9 and 83 g. Three specimens are associated with FN II, one with FN III an the remaining 11 could not be assigned a component.

Abrasive Stones

Saws n = 10, Figure 27: d

Ten specimens of different textured sandstone and a single example of slate are tentatively categorized as stone saws. All but one have either a tapered or beveled cutting edge and one of these has been resharpened through flaking. The exception has a stepped margin along the ventral face which appears to have resulted from use. All have use striae running parallel to the cutting margin. Excluding the slate specimen, the sample exhibits abrasion on the dorsal surface and six have been used on both the dorsal and ventral faces. These implements are immediate use tools and no effort has been made to give them a specific shape beyond the preparation of a functional edge. One has the margin opposed to the saw edge abraded flat. Subjectively I would classify this sample as being manufactured from a fine textured sandstone. Component associations include FN II (2), FN III (1) and unassigned (7).

	mean	*stnd. dev.*	*min/max*	*n*
length	76.50	22.98	55-115	6
width	49.83	7.88	37-58	6
thickness	9.70	5.14	5-19	10
weight	72.20	62.79	37-184.1	5

Handstones n = 6, Figure 27: e

Five specimens have been formed on small beach cobbles of a siltstone-like material (3) or a dense granitic material. A sixth specimen is made of a fine grained sandstone. In terms of qualitative attributes, the sample is similar to the handstones collected at Montague Harbour by Mitchell (1971: 123). All have a flat ventral abraded face while four have been used on at least one other surface. One also has facet-like surfaces on the lateral margins. Specimens are relatively small facilitating easy use in the hand. The density of the underlying stone indicates these implements to be best suited to a finishing polish, as opposed to rough abrasion. Component associations include FN I (2), FN II (2), FN IV (1) and unassigned (1).

	mean	*stnd. dev.*	*min/max*	*n*
length	66.67	15.01	58-84	3
width	49.00	4.97	45-56	4
thickness	24.67	3.78	20-27	6
weight	114.67	13.80	99-125	3

Bar Abraders n = 20, Figure 27: c

Although only three specimens are complete, all possess a minimum of two straight formed lateral margins indicating a former bar shape. On three implements, one set of opposing formed margins taper slightly while the remainder have either parallel formed sides or two adjacent shaped edges meeting at a right angle. All but one piece are fine grained (10) or medium grained (9) sandstones. The exception is a piece of breccia. Virtually every specimen has heavy use discernible on the dorsal face. On three, this has resulted in a shallow dished depression. Ventral use appears less heavy with four specimens having none. At least three of the identifiable bar abraders may also have been used along the lateral margins. Red stains found on one specimen potentially illustrates its use in pigment preparation. Assigned components include FN I (1), FN II (2), FN III (3), FN IV (3) and unassigned (11).

	mean	*stnd. dev.*	*min/max*	*n*
length	98.00	26.29	76-136	4
width	55.60	14.59	39-83	10
thickness	16.32	7.02	9-32	19
weight	120.17	27.66	104.2-152.1	3

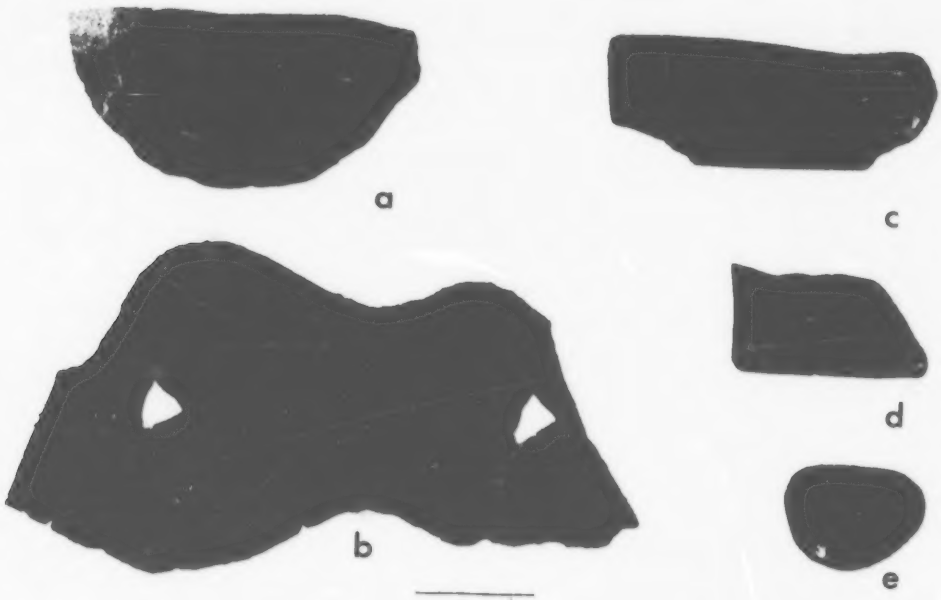


Figure 27. Abrasive Stones: a other abrader; b grinding slab; c bar abrader; d saw; e handstone. Assigned components: FN I, b, e; Other, a, c, d.

Irregular Abraders and Fragments, n = 170

Abraders with natural or broken edges are indistinguishable from fragments of shaped abraders or small grinding slabs. All but two of the 170 specimens within the sample are sandstone; the exceptions are a siltstone-like and granitic materials. A subjective assignment of texture to the sandstone collection identifies 17 as coarse, 102 as medium grained and 49 as fine grained. All specimens have light to heavy dorsal surface use which, on 38, has resulted in shallow to relatively deep dished depressions. Wear on the ventral face occurs on 78. Sizes and shapes within this sample vary considerably. Component associations include FN I (29), FN II (27), FN III (32), FN IV (21) and unassigned (61).

	mean	*stnd. dev.*	*min/max*	*n*
length	72.26	26.20	20-142	170
width	54.28	19.37	19-104	170
thicknss	12.69	5.96	3-36	170
weight	88.69	83.67	1.2-476.2	170

Grinding Slabs n = 23, Figure 27: b

Following Mitchell's terminology (1971: 125), 23 of the largest abrasive stones (surface area) are subjectively categorized as grinding slabs. All are relatively heavy suggesting they remained in a stable position during use. Five are fragments of even larger pieces and ten others with irregular shapes might also be fragmented. Each specimen, however, is considerably larger than all other abraders. All grinding slabs are made from sandstone with fine (8), medium (11) and coarse textures present. Eleven specimens are manufactured from relatively thick blocks and the remainder are based on thinner slabs. Characteristic of this sample is medium to heavy use-wear on the dorsal surface with 13 also having ventral modification. Seven specimens have shallow dorsal depressions. Within this sample, five are particularly

distinctive by their shape. One piece, missing both ends, is flaked into a figure eight-like form (Figure 27 b). Another is ground ovoid, while a third has been roughly flaked into a bar abrasive. Both of the remaining are large fragments with two ground adjacent edges creating a right angle. Grinding slabs are associated with FN I (2), FN III (5) and FN IV (3) components with the remainder unassigned.

	mean	*stnd. dev.*	*min/max*	*n*
length	184.56	56.62	107-342	18
width	125.78	32.59	80-192	18
thickness	38.83	26.43	9-96	23
weight	1338.04	1240.70	210-4892	18

Other Abraders n = 2, Figure 27: a

Two abrasive stones do not fit previously defined classes. One is semi-lunar in shape with all margins flaked, pecked or ground (Figure 27 a). Manufactured from a fine textured sandstone, it has been heavily used on the dorsal face, with a lesser amount of use-wear apparent on the ventral surface. This implement measures 144 × 105 × 9 mm and weighs 195.2 g. The other example is simply the end section of a fine grained elongated sandstone pebble. It has a round cross section with light use-wear along the margins. Missing the proximal end, it is (48) × 18 × 12 mm in size and weighs 14.9 g. The latter specimen is associated with FN II, the former could not be assigned to a component.

Beads, Ornaments and Artwork

Ground Stone Beads n = 8, Figure 26: c-f

In comparison to shell beads, ground stone beads are exceptionally rare. The sample includes two siltstone barrel beads, four shale/slate disc beads, a steatite disc bead and a fragmented bead of bituminous coal. Both barrel beads are thick, elongated and asymmetric in cross section. As well, both appear to be biconically drilled. Specimens are 14 mm wide, 12 and 13 mm thick and 9 and 8 mm long. Hole diameters are 3 and 5 mm, while weights are 1.5 and 2.3 g. Shale/slate disc beads tend to be thin and symmetric in cross section. They have a 6.75 mm mean diameter (s = 0.5) and a 2.5 mm mean thickness (s = 0.58). Three of the drilled perforations are biconical and one is drilled from one side only. All perforations have a 2 mm diameter. The steatite bead is asymmetrical, measuring 13 × 11 × 4 mm and weighing 0.8 g. It has a 5 mm perforation diameter. Finally, the coal bead fragment is split longitudinally. The outside diameter is 12 mm with a 5 mm biconical perforation. The remaining length is 8 mm. The barrel beads (Figure 28 c,d) are associated with Burial 2 and assigned to FN I. The remainder are affiliated with FN II.

Effigy Pendants n = 2, Figure 28: a; 29: a

A zoomorphic and an anthropomorphic pendant are present within the False Narrows assemblage. The zoomorphic example, a stylized beetle manufactured from coal, illustrates a high quality of workmanship (Figure 29 a). This specimen was recovered as part of the Burial 52 grave good assemblage and has been assigned to the FN I component. On the dorsal horizontal view, the specimen is roughly discoid in body form with a straight sided tapering projection on the proximal end serving as a nose. Two incised circular eyes, 8 mm in diameter, are centred below the nose with a semicircular inscribed line delimiting the head area. Inscribed laterally across the body are five parallel straight lines. In lateral view, the body is cut longitudinally by two parallel lines forming a central ridge. The nose projection has been perforated laterally for suspension by a cord. This perforation has a keyhole shape. It is 8 mm long with a maximum width of 3 mm. The ventral surface of the beetle is flat. This specimen is 75 mm long, 47 mm wide and 19 mm thick.

The anthropomorphic pendant, manufactured from siltstone, is less well made (Figure 28 a). Roughly ovoid in outline shape, the facial design has been etched on the dorsal surface. This includes curvilinear incisions for the nose, eyes and eye brows. A biconically drilled

hole (4 mm in diameter) serves both as a line attachment mechanism and an open mouth. The ventral face is unmodified. This specimen measures 45.6 × 44 × 9 mm. It also has been assigned to the FN I component.

Other Pendants n = 3, Figure 28: b

Three undecorated ground stone pendants were recovered. Two, a proximal fragment and an irregular shaped piece, are manufactured from siltstone. The third, having an regular form, is made of bituminous coal. The irregular shaped siltstone example (32 × 14 × 8 mm, weight = 3 g) seems to be a natural form with minimal modification (Figure 28 b). The line perforation, drilled from one side only, is 1.5 mm in diameter. The second siltstone specimen ([25] × [23] × 8 mm) is missing the majority of its distal segment. Being heavily water worn, this pendant's line hole is 3 mm in diameter and biconically drilled. The final example is rectanguloid with a projection on its proximal end. In longitudinal section, the specimen is wedge-shape and has a plano-convex cross section. The projection, which has been broken, is biconically drilled (3 mm diameter). Intact measurements for this piece are (23) × 10 × 8 mm, with a weight of 1.5 g. The first and third pendants are associated with FN II; the other could not be assigned to a component.

Effigy Carvings n = 5, Figure 28: g-j; 29: b

Four zoomorphic representations and an anthropomorphic sculptured head are classed as effigy carvings. The head (104 × 69 × 61) has been well made from a block of sandstone (Figure 29 b). Distinguishable features include ears, eyes, eye brows and nose. Near the base

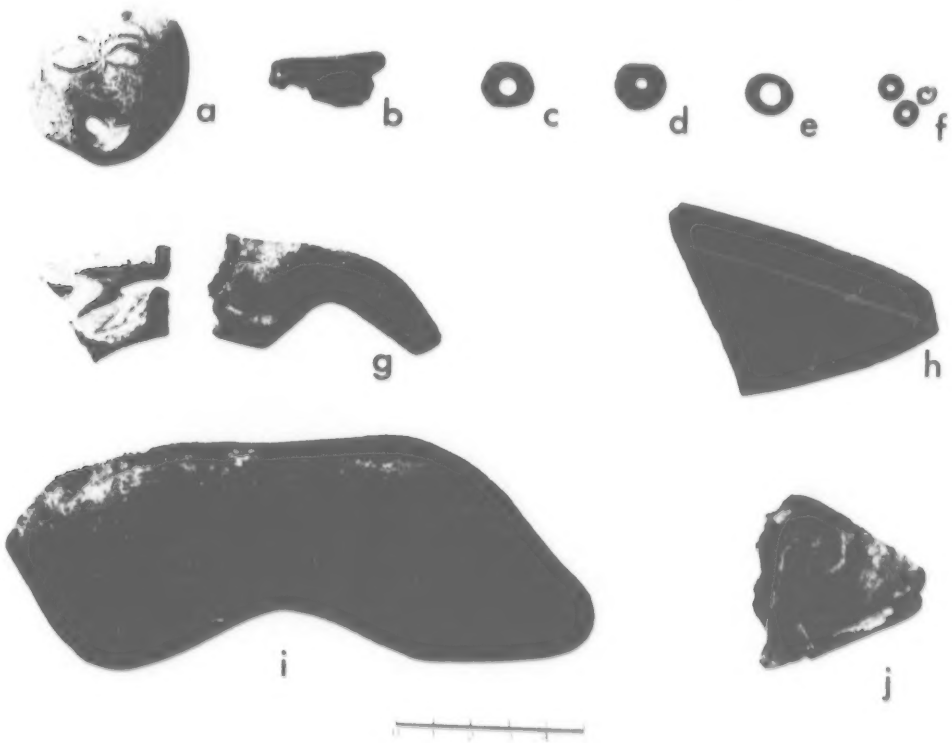


Figure 28. Miscellaneous Ornaments and Inscribed Artifacts: a anthropomorphic pendant; b plain pendant; c-f stone beads; g-j effigy carvings. Assigned Components: FN I, a, c, d, g-i; FN II, b, e, f, j.

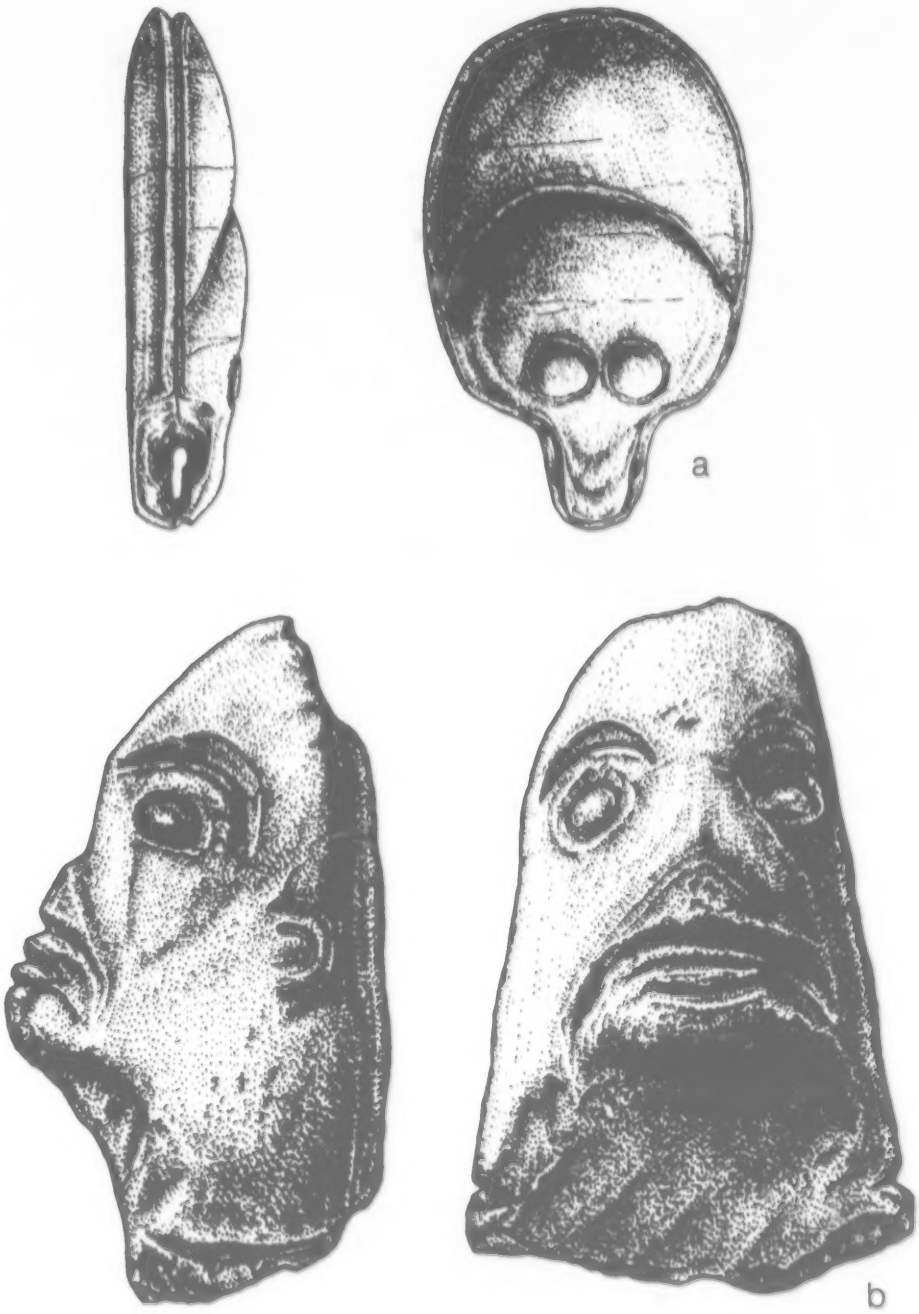


Figure 29. Beetle Pendant and Anthropomorphic Head: a, beetle pendant; b carved head.
Assigned Components: FN I, a; FN II, b.

of the neck is a laterally incised line. The ventral surface of the base is truncated and slightly irregular suggesting this piece to be a fragment of a larger artifact, possibly a seated figurine bowl. The specimen has a sloping chin and receding forehead. It was recovered from a context associated with the FN II component.

The zoomorphic examples include two fish head effigies, one each of sandstone and slate, an inscribed siltstone concretion possibly representing a seal (?), and two fragments of a limestone conglomerate carving for which a subject cannot be determined. Both fish head pieces are remarkably similar in horizontal view including a dorsal and ventral eye and inscribed curved mouth. On one, eyes are formed by shallow incised circles 7 mm in diameter. On the other, a natural circular depression has been employed on one face while a deeply incised circle resulting in a central protrusion is used for the other. Both are 10 mm in diameter. Lateral margins for these pieces are flat. The sandstone specimen may also have been used as an abrader. Dimensions for the two are 67 × 55 × 7 mm and (44) × (47) × 15 mm. The sandstone specimen is associated with FN I, the slate piece is assigned to FN II.

A club-like siltstone concretion has a scratch design on both dorsal and ventral surfaces that give it the appearance of a seal. The dorsal face is more distinctive in form with a well defined eye and mouth. Slight modification to shape a protruding nose appears to be the only alteration of the natural outline form. Several parallel lines, curving toward the head, are found on the body section of the ventral surface. This piece is 154 × 57 × 23 mm. It has been associated with FN I.

The final carving is represented by two fragments of a limestone conglomerate material. One, thought to be the distal end, may include a projecting tail although this is highly interpretive. The other, felt to be part of the body, is deeply inscribed forming a longitudinal incision. Respective measurements for each piece are (64) × 31 × 9 mm and (36) × (29) × 13 mm. These pieces are associated with FN I.

Miscellaneous Ground Stone

Stone Pipe Fragments n = 3, Figure 30: d, e

Three steatite pipe fragments, representing at least two individual pipes, were recovered. Included are two bowl pieces and a stem section. The bowl fragments both retain a partial lip which is single beveled in one case and single tapered in the other. While burning on the ventral face of one is quite noticeable, the surface of the other is obscured because of water tumbling. Maximum thickness for the two is 3 mm and 4 mm. The stem and mouth piece section (15 mm diameter × [37 mm] long) is made of a black steatite closely resembling one of the rim fragments. It is heavily abraded on the intact proximal end with striae running parallel to its length. These striae are cross cut by lateral abrasion around the stem circumference 19 mm from the tip. The bore diameter is 7 mm. One of the bowl fragments is associated with FN III. Neither of the others could be assigned a component.

Miscellaneous Ground Implements n = 5, Figure 30: a-c

A nephrite carving tool, a ground slate bar, a spindle whorl and two point-like slate fragments are incorporated into a miscellaneous category. The carving tool (after Borden 1970: 102) is a long slender nephrite piece ([51] × 10 × 6 mm) with a rectangular cross section. Although fragmented from use on the distal end, a former pyramidal tip is evident. The proximal end, also fractured but retaining polish, may have been resharpened. One lateral margin near the proximal end has both edges beveled. The slate bar is rectanguloid in planar view. Both ends are unworked or broken while the ventral face is also unmodified. Lateral margins have a steep single bevel. This specimen measures (37) × 12 × (3) mm and has a weight of 2.6 g. A round siltstone disc with a central biconically drilled perforation (6 mm in diameter) is tentatively identified as a spindle whorl. Although relatively small (59 × 57 × 3 mm), it is well made, symmetric in outline form and has the circumference edge ground flat. Both dorsal and ventral faces are also ground smooth and flat.

Figure 30. Miscellaneous Ground Stone Artifacts: a, c miscellaneous ground objects; b spindle whorl (?); d, e stone pipe fragments. Assigned Components: FN III, b, e; FN IV, c; Other, a, d.

The final two miscellaneous ground stone specimens might also have been placed in the fragmented ground point sample. One, a body fragment with straight but blunted blade edge margins, has inscribed lines along both dorsal and ventral longitudinal edges. These lines, with a spacing interval range of 3 to 7 mm, do not extend across the body. Aside from a stylistic element, they have no apparent utility. Measurements for this implement are (46) × 27 × 4 mm and its cross section is biconvex. The second specimen ([63] × 22 × 11 mm) has a symmetric hexagonal cross section with a wedge shape distal end. The proximal end has been sawn on all margins and snapped. Edges are straight and double beveled. Although there is a possibility that this piece is the proximal end of a larger form of ground point, a comparable analogue is absent in the assemblage. Only the spindle whorl and the specimen with incised lines have been given a component assignment. Respectively, these are FN III and FN IV.

Miscellaneous Ground Stone Debitage n = 16

Sixteen pieces of ground stone debitage were catalogued as part of the artifact assemblage. Of these, six are slate, two are basalt, two are of a compact sedimentary material and the remainder are single examples of quartzite, an igneous extrusive material, greywacke, schist, syenite and bituminous coal. While a few are possibly fragments of larger unidentified tools, the majority seem to be either by-products of tool production or implements in the initial stage of modification. In addition to grinding, four specimens have been flaked and one is sawn. For the sample as a whole, weight measurements range from 11 to 810 g.

PECKED/GROUND STONE ARTIFACTS

Hand Mauls

Nipple Top Hand Mauls n = 5, Figure 31: c, d

Three relatively complete and two proximal segments are classed as nipple top hand mauls. Of the complete specimens, two have an asymmetrical striking head and the third is circular. Characteristic of this class, the distal flange tapers to a symmetrical circular shaft which also tapers longitudinally to a distinct circular proximal flange. On all, centred conical

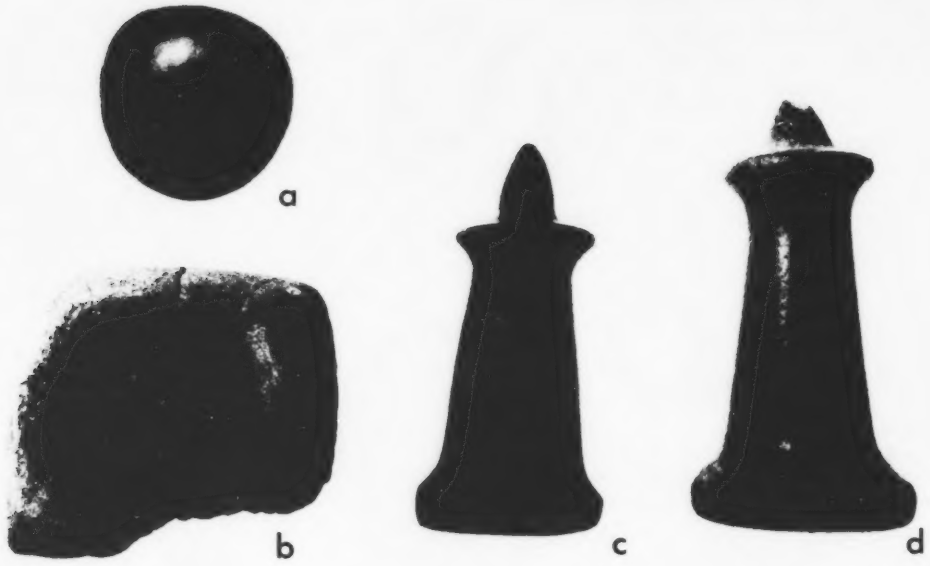


Figure 31. Mauls, Hammerstone and Stone Bowl: a hammerstone; b bowl; c, d nipple top hand mauls. Assigned Components: FN III, c; Other, a, b, d.

"nipples" cap the implement. Four of the five are manufactured from andesite and the other is greenstone. In every case, the specimen is well formed and highly polished. One of the complete specimens has parts of the proximal and distal flanges broken away thus reducing its overall weight of 1038 g. In comparison, the other two complete examples weigh 1051 g and 1426 g. One fragment can be assigned to FN I, a complete specimen is associated with FN III and a second fragment is affiliated with FN IV. The remaining two pieces could not be assigned a component.

	mean	*stnd. dev.*	*min/max*	*n*
overall length	185.33	9.02	176-194	3
nipple length	28.40	5.37	23-37	5
dist. flange dia.	82.33	13.44	73-96	3
prox. flange dia.	59.40	5.94	53-68	5
nipple base dia.	28.40	2.70	26-33	5

Maul Fragments n = 3

A complete circular striking head and two shaft sections, possibly from the same implement, are present. While all three are of andesite, the former specimen is green-black in colour with the latter fragments dark brown. The striking head is 90 mm in diameter. The base of the shaft diameter is 67 mm and also circular. All pieces are from well made and highly polished specimens. None could be given a component assignment.

SINKER STONES

Centre Perforated Stones n = 7 Figure 32: d

Seven flattened sandstone cobbles have a single biconically pecked hole centrally positioned. In rough outline form, two are elliptical, two are ovoid, two are asymmetrically circular and one is trianguloid. In addition to being perforated, two have dorsal/ventral

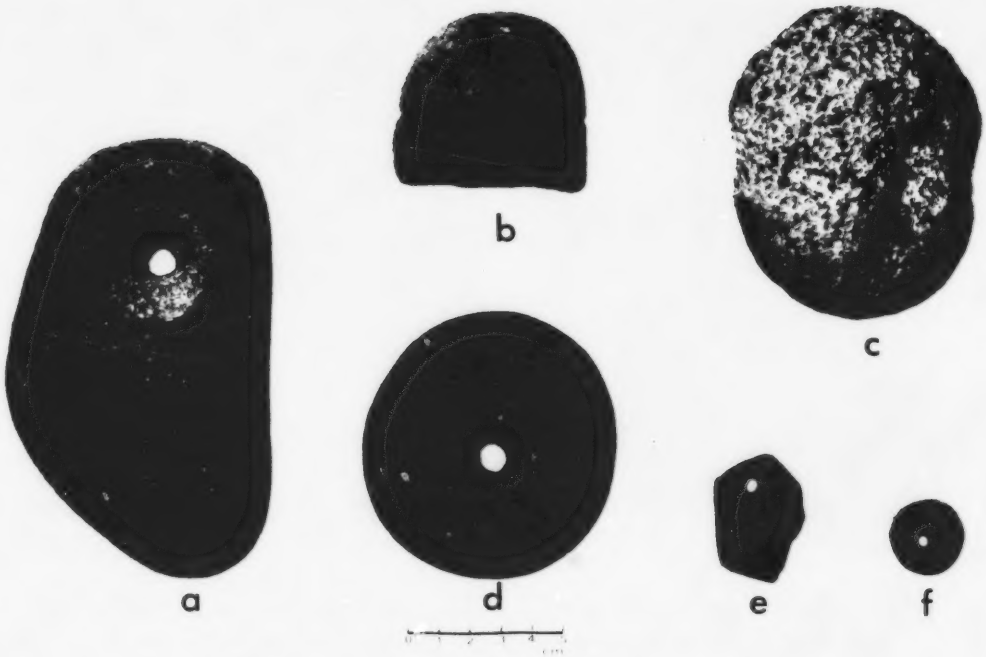


Figure 32. Sinker Stones: a end perforated stone; b T-girdle stone; c single girdle stone; d centre perforated stone; e, f miscellaneous perforated stones. Assigned Components: FN I, a, f; FN II, b-d; Other, e.

grinding. An end perforation had also been started on one surface of a single specimen. Similar samples of small unformed perforated stones are interpreted as net weights (King 1950: 36). Component associations include FN II (4), FN III (1) and unassigned (2).

	mean	*stnd. dev.*	*min/max*	*n*
length	70.57	15.80	52-94	7
width	62.69	16.41	40-83	7
thickness	19.29	5.59	13-29	7
hole diameter	6.43	1.51	4-8	7
weight	140.39	97.14	36.5-322.3	7

End Perforated Stones n = 3, Figure 32: a

Functionally analogous to the above sample, end perforated stones differ in their hole position. The first specimen, based on a cobble of granitic material, measures 141 × 5 × 23 mm with a weight of 472.3 g. It has a single biconical pecked hole with a diameter of 9 mm. The lateral margins on this specimen are lightly pecked. The second example is a cobble of greenstone that also has a biconically pecked hole in one end (6 mm diameter). This specimen weighs 49.6 g and is otherwise unmodified. The final piece is based on an unmodified sandstone block fragment. It is 41 × 31 × 9 mm with a weight of 46.9 g. The perforation has been biconically pecked with a diameter of 4 mm. Respectively, these specimens are associated with FN I, FN III and unassigned components.

Miscellaneous Perforated Stones n = 11, Figure 32: e, f

Four fractured specimens with complete perforations, four specimens in the beginning stages of hole manufacture and three other pieces are assigned to this class. The group of four

fragments, based on remaining shape, includes two each of centre and end perforated types. All are split laterally across the hole which, for the sample, has a mean diameter of 12.75 mm. One specimen has been ground on both the dorsal and ventral surfaces and another has heavy dorsal wear. With the exception of a diorite piece, all are sandstone. Three of the four specimens with incomplete perforations have fractured transversely in the hole manufacturing process. The fourth specimen has a shallow depression pecked on the dorsal face with an exfoliated ventral surface. Two of the fractured pieces have opposed pecking on both the dorsal and ventral faces. All specimens would have been of the centre perforated type. Sandstone cobbles serve as base materials for three while the fourth is a diorite cobble. A mean diameter of 111.75 mm and a mean thickness of 31 mm have been taken for the sample.

The remaining pieces, while having perforations for a line attachment, differ in manufacturing technique and size from the preceding groups. The first is a small circular sandstone disc (25 × 24 × 8 mm) that has been well made with dorsal, ventral and circumferential surfaces abraded flat. A centred, biconically drilled perforation has a diameter of 4 mm. This specimen weighs 8.5 g. The second piece is a small pentagonal shaped section of sandstone weighing 14.5 g. It also has a biconically drilled perforation (5 mm in diameter) which is centred near the proximal apex. Both ventral and dorsal surfaces are ground smooth. This specimen measures 41 × 31 × 9 mm. The final example ([34] × 21 × 8 mm) is an unshaped piece of sandstone with a biconically drilled hole (diameter = 6 mm) along one edge. It weighs 7.9 g. For the class, component associations include FN I (2), FN II (4), FN III (1) and unassigned (4).

Single Girdle Stones n = 6, Figure 32: c

Six relatively large cobbles, five of sandstone and one of syenite, have a single pecked groove along either the longitudinal (4) or transvere (2) axis. These grooves vary considerably in depth (0.5-4 mm) and width (7-21 mm) on different specimens. All, however, would facilitate a line attachment. All pieces are interpreted as sinker stones. One sandstone specimen is fragmented. Four specimens are associated with FN II and the others could not be assigned.

	mean	*stnd. dev.*	*min/max*	*n*
length	120.20	16.08	07-140	5
width	93.17	14.58	76-120	6
thickness	70.17	7.63	57-78	6
weight	11.14	418.61	632-1737	5

T Girdled Stones n = 3, Figure 32: b

This group is characterized by a pecked medial transverse groove intersected by a centred longitudinal groove which runs over only half of the specimen. The sole material represented is sandstone and all are based on cobbles. On two, grooves are well defined on all surfaces while on the third they are noted only along the lateral and proximal margins. One specimen measures 132 × 108 × 61 and weighs 1240 g. The second is 112 × 102 × 68 with a weight of 866 g. The final specimen is fragmented with surviving measurements of (54) × 59 × 51 and a weight of 218 g. All three specimens are associated with the FN II component.

Large Girdled Stones n = 3

Significantly larger and heavier than the preceding groups of net weights, these specimens probably served as canoe anchors (after King 1950: 36). They consist of two sandstone boulders and a large sandstone block. Grooves are pecked longitudinally on two and on the latral margins of the third. On one of the longitudinally girdled specimens, a pecked central depression is present on the ventral face. The largest specimen measures 288 × 263 × 109 mm and has a weight of 12,070 g. Grooves on this piece are between 15 and 25 mm wide. The second largest example is 237 × 242 × 119 with a weight of 11,338 g. It has grooves between 20 and 30 mm wide. The final specimen is 220 × 178 × 126 g and has a weight of 5,678 g.

Groove width is between 8 and 12 mm. One specimen is associated with FN II and the remaining pair could not be assigned to a component.

Other Pecked/Ground Stone

Stone Bowls and Fragments n = 4, Figure 31: b

Two relatively complete bowls, a specimen which appears to be in the initial manufacturing stage and a decorated fragment are included here. All are made of sandstone. Aside from sharing a crude finished form, the two nearly complete examples are quite different. The first (133 × 128 × (75) mm) is rectanguloid, has a standard depth of 24 mm with thick (30-33 mm) tapering walls. A corner segment is missing and the ventral surface is exfoliated. The interior of the dish is also rectanguloid and has dimensions of 86 × 76 mm. The second piece ((97) × 59 × 19 mm), although not as regular, also has a general rectanguloid shape. Depth of the dish walls varies from nearly nondistinct on one lateral margin to a maximum of 10 mm on another. Wall thickness is variable with a 28 mm maximum; the interior dish shape is roughly ovoid. Along the rim surfaces, where present, a series of parallel transverse diagonal lines has been scratched. While the ventral bowl face is flat, an end segment is missing. Dish depressions on both pieces have been manufactured through a combination of pecking and grinding. The latter specimen is associated with FN I, the former could not be assigned to a component.

The bowl preform, or specimen I have interpreted as being in the initial stage of processing, is a flattened sandstone cobble with the beginning of a large pecked depression (diameter = 50 mm) up to 12 mm in depth. One end has fractured which may have occurred while the piece was being worked. Some abrasion is present on both the dorsal and ventral surfaces. This specimen measures 138 × (75) × 40 mm. This piece has been assigned to the FN III component. Although the final specimen may not be a bowl fragment, I have taken it to be a portion of a decorated rim. Only the dorsal surface remains intact. It has a stepped ridge near the proximal margin which is cut by a series of parallel longitudinal inscribed lines (n = 21) 1 to 2 mm apart. The lip protrudes 6 mm. Remaining dimensions for this fragment are (46) × (23) × (13) mm. It is associated with FN I.

Hammerstones n = 5, Figure 31: a

Cobbles of basalt (3), diorite (1) and an undetermined sedimentary material (1) have pitted and battered ends distinctive of hammerstones. Three specimens are asymmetrically round with the remainder being elliptical in form. In all cases, battering is present on opposing ends with one also having ochre stains indicative of pigment preparation. Dorsal/ventral modification is light with indistinct pitting on two and slight abrasion on another. The two heaviest implements could also have been used as hand mauls. Component associations include FNI (1), FN II (1) and unassigned (3).

	mean	*stnd. dev.*	*min/max*	*n*
length	110.8	26.00	75-138	5
width	71.5	21.75	49-103	5
thickness	51.60	10.04	41-68	5
weight	823.12	543.63	222.6-1186	5

Miscellaneous Pecked/Ground Stone n = 3

Two complete cobbles of andesite and granite and a fractured specimen of an igneous extrusive material have identifiable pecking on at least one surface. For the andesite example (112 × 96 × 58 mm), battering is centred on the flattened dorsal face, suggestive of an anvil stone or, possibly, a light maul (weight = 969.9 g). A function for either of the remaining pieces cannot be identified. One is lightly pecked and ground on the dorsal, ventral and lateral margins and the other is pitted along the intact circumferential edge. For this pair, metric dimensions are 116 × 86 × 40 mm and (82) × 61 × 40 mm with respective weights of 605 and 236 g.

BONE ARTIFACTS

Fixed Bone Points

Multiple Barbed Points and Fragments n = 33, Figure 31: a-g

An assortment of multiple barbed fixed bone points was recovered at False Narrows. Many of these specimens have been analysed by McMurdo (1972) in a larger study of fixed bone and antler points from the Northwest Coast. Based on gross morphology with emphasis on barb type and application, she considers her typology to have "culture historical relevance" and "functional validity". Although it is not my aim to assess McMurdo's typology, her format facilitates description. Of McMurdo's fixed bone point types, three are present in the sample. These include points with square enclosed barbs (8), points with low extended barbs (2) and a serrated butt point. I have also added a class of points with low enclosed straight barbs (3) as well as miscellaneous (2) and fragment groups (10). While few specimens are complete, all but those identified as fragments have a full range of barb diagnostics. Overall, the barbed bone point sample has been assigned to FN I (3), FN III (7), FN IV (1) and unassigned (15).

Points with Low Square Enclosed Barbs n = 8 Figure 33 a, f — Within this subclass (McMurdo Type I), one point is fully complete (Figure 33 a). It measures 172 × 9 × 7 mm and weighs 10.5 g. Having a slightly curved profile, both tip and base are conical in form. The 23 barbs are closely situated. A second specimen is also relatively complete, missing only its tip. This point (Figure 33 f) measures (59) × 11 × 6 mm and weighs 4.0 g. Seven barbs remain intact. The base is conical. The remaining six points include two tips, one base and three medial segments. All pieces have closely applied barbs and a straight profile. Tips are pointed and sharp while base segments are conical. One base has had its apex cut or broken blunt. Only one specimen does not have regularly spaced barbs. Intact measurements for the fragments include a maximum width of 9.33 mm and a mean thickness of 5.4 mm. Two of these points with low square enclosed barbs are assigned to FN III; the remainder lack secure provenience.

Points with Low Straight Extended Barbs n = 2 Figure 33 c — Neither of the two examples with low straight extended barbs (McMurdo Type VIII) is complete, nor can they be assigned to a component. One is a medial body segment and the other is a butt and body fragment. On the former, barbs are regular and closely spaced (n = 5). The latter has a regular but isolated barb placement (n = 4). Respective measurements for this pair are (75) × 10 × 7 mm and (128) × 10 × 6 mm.

Serrated Butt Point n = 1 Figure 33 g — The single serrated butt specimen (McMurdo Type VI) is distinctive in comparison to the remainder of the assemblage. Although missing its tip, it retains one low straight barb. The base is flat on the ventral surface and slightly rounded on the dorsal face. It has straight parallel lateral margins abruptly tapering to a pointed and conical butt. Six notches have been placed on the margin immediately below the barb. The specimen is (53) × 10 × 5 mm in size and weighs 2.1 g. It is associated with FN III deposits.

Points with Low Straight Enclosed Barbs n = 3 Figure 33 d — Two base/body segments and a medial fragment are included within this class. One of the former has a conical base and close barb application. Remnant measurements are (86) × 10 × 7 mm. The point profile is straight and three barbs remain intact along the body. The other base/medial segment has an isolated barb (n = 3) placement with a serrated margin immediately below (Figure 33 d). Including three refitted pieces, this point measures (127) × 8 × 6 mm. The base is wedge shaped. The body fragment has only one intact barb which is thinned on either side. This gives the barb an appearance of being inserted into the point's lateral margin. The specimen having serrated margins below the barb application is assigned to FN III. Provenience for the remaining pair is insufficient for component affiliation.

Figure 33. Fixed Bone Points: a-g unilaterally multiple barb or serrated points; h single barb point; i, j nonbarbed points. Assigned Components: FN I, h, i; FN II, j; FN III, d, f, g; FN IV, e; Other, a-c.

Miscellaneous Barbed Points n = 2 Figure 33: b, e — This subclass includes a nearly complete specimen and a piece which has been broken and reworked. Missing a portion of its tip, the first has four closely spaced high extended straight barbs (Figure 33 b). Lateral margins for the base are straight and the base is asymmetrically convex and blunt. Wear on the dorsal and ventral surfaces of the base indicates this point was hafted up to 41 mm from the proximal end. The specimen measures (155) × 14 × 8 mm and weighs 12.6 g. The second miscellaneous point is a tip and body fragment (Figure 33 e). Following breakage, the base was reworked by flaking to form a straight and thin edge. The two remaining barbs are square, enclosed, low and isolated. Because this specimen is considerably wider than others with square enclosed barb applications (width = 18 mm), it was not included within the previously described class. This point is 83 mm long, 8 mm thick and weighs 13 g. Its tip, wedged from the dorsal and ventral faces, is pointed. The latter specimen is associated with FN IV, the former could not be assigned to a component.

Multiple Barbed Point Fragments n = 10 — Ten fragments, including base/body (3), tip (2) and medial sections (5), are not complete enough to incorporate within the preceding groups. Base type is conical in one case, pointed-wedged in another and wedged-straight in the third. One tip is conical with a high extended barb. The other tip is wedge shaped with the attached barb fractured. All but one of the body sections have a single barb from which point diagnostics could not be determined. The exception is a badly weathered specimen with a close barb application. The barb form, however, was not distinguishable. A single body fragment with a high extended square barb comes from a relatively heavy point or harpoon. Three of the barbed point fragments are associated with FN I. The remainder are assigned to FN III (3) and other (4).

Single Barbed Points n = 2, Figure 33: h

Two specimens, one missing its base and the other its barb, are classed separately from the multiple barbed points just described. Both are slender, well made implements with circular cross sections on the body. A single straight extended barb was placed near the tip. The intact base is conical. McMurdo (1972: 88) has recognized unibarbs as a separate class (IV) within the fixed point assemblage. The False Narrows specimens conform to her Type II points. These implements are interpreted to be fish hook barbs. Measurements for the pair are 65 × (4) × 3 mm and (49) × 6 × 3 mm. Both specimens have been assigned to the FN I component.

Nonbarbed Fixed Points and Fragments n = 12, Figure 33: i, j

Points within this class have basal characteristics, an outline form, or they are of a size that indicates a likely use as fixed arrow or dart points, hafted either in a cleft or scarfed to a foreshaft. Seven specimens are relatively complete and five others are fragments. For the relatively complete examples, there is a tendency for an excurvate body form with a rectanguloid to plano-convex cross section. Lateral margins are either ground blunt (5) or tapered (2). All tips are conical with bases wedged (3) or blunted (3). Basal margins, with the exception of a slightly convex example, are straight. Two specimens have a fractured tip and another is missing a portion of the base. The five fragments are all tip sections. Three of these are manufactured from split long bone and have an intact, lightly modified medular cavity. All tips are wedged flat and pointed. For the sample, component associations include FN I (1), FN II (7), FN III (1), FN IV (1) and unassigned (2).

	mean	*stnd. dev.*	*min/max*	*n*
length	60.40	7.47	53-71	5
width	11.29	3.50	9-19	7
thickness	4.57	3.50	3-5	7
weight	3.62	1.39	2.6-5.9	5

COMPOSITE TOOL POINTS

Abrupt Conical Tip Points n = 11, Figure 34: h-k

I interpret the abrupt conical tip points from False Narrows to be arming tips for composite toggling harpoons. Despite sharing a characteristic well formed abrupt conical tip, this class may be divided into two subgroups defined by basal form. Included are five points with conical butts that fit channelled toggling harpoon valves and six specimens with wedge shape bases suitable for slotted toggling harpoon valves. Both valve types are present at False Narrows. One specimen has been assigned to FN II, six are associated with FN III and a component for the remainder could not be determined.

Pointed Base Subgroup n = 5 — Pointed base specimens, although varying in size, are standard in form attributes. They are bipointed with the intersection of the distal and proximal segments relatively close to the tip. The basal element is long, tapered and conical. On two specimens, the ventral surface of the base has been flattened providing a plano-convex body cross section. The remainder are biconvex or round in section. On one point, the tip has broken.

	mean	*stnd. dev.*	*min/max*	*n*
length	44.75	17.04	26-67	4
width	8.00	1.58	6-10	5
thickness	6.00	1.87	4-9	5
weight	2.35	1.68	0.7-4.7	4

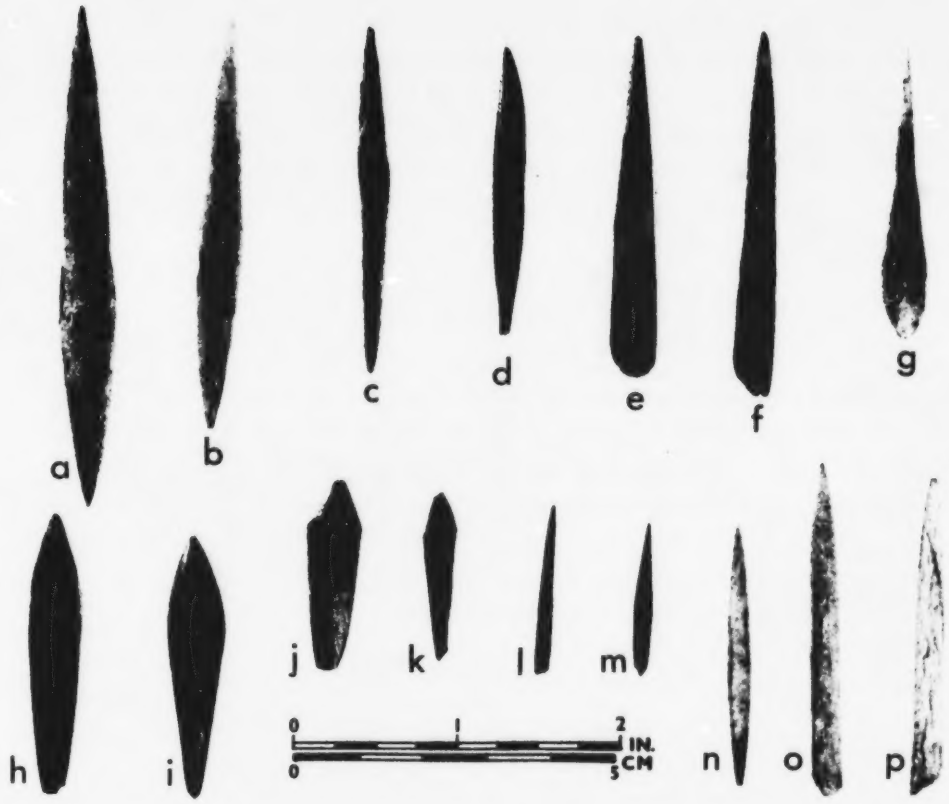


Figure 34. Bone Composite Tool Points: a-d bipoints; e-g slender tip wedge base points; h-k abrupt conical tip points; l-n sliver points; o, p unipoints with cut bases. Assigned Components: FN II, k, l, n; FN III, f, h-j, m; Other, a-e, g, o, p.

Wedged Base Subgroup n = 6 — The wedge based form also has a maximum width at the intersection of the proximal and distal elements. As well, this occurs well above the point mid line. The dorsal and ventral surfaces of the body are flat moving to a wedge shape butt. Lateral margins are flat or rounded and tapering to a straight (1), convex (3) or pointed (2) base. Body cross sections vary from rectanguloid to plano-convex.

	mean	*stnd. dev.*	*min/max*	*n*
length	34.67	9.73	22-45	6
width	8.67	0.82	8-10	6
thickness	4.67	1.21	4-7	6
weight	1.35	0.21	1.1-1.6	6

Slender Tipped Wedge Base Points n = 23, Figure 34: e-g

As a whole, this sample has a diagnostic slender conical tip with a long slender well formed shaft. The shaft, intergrading between biconvex and plano-convex in cross section, gradually expands toward the basal element. Although all bases are wedge shape, the length of dorsal/ventral tapering varies between individual specimens. On two, it is rather abrupt giving them a "pinched" appearance. For the most part, basal lateral margins are straight and converge (11) to the proximal edge although excurvate (1), straight-parallel (3) and straight-

expanding forms (5) are present as well. The proximal edge varies between straight (5), convex (7), pointed convex (6) and irregular (3). A number of these implements are fragments. Component associations for this sample include FN I (2), FN II (2), FN III (7), FN IV (5) and unassigned (7).

	mean	*stnd. dev.*	*min/max*	*n*
length	49.06	7.48	38-59	16
width	6.30	1.49	3-9	23
thickness	3.58	0.79	2-5	23
weight	1.26	0.44	0.4-1.9	16

Unipoints with Cut Bases n = 14, Figure 34: o, p

It is uncertain whether this class of unipoints represents complete tools or fragments of another form. The majority have abruptly cut bases which, on two, include a sharp single bevel. I have treated them, therefore, as an intended stylistic or functional form. Within the sample, two subclasses can be defined by body type. This includes specimens with angular bodies (10) and others having smooth rounded shafts (4). Butt cross sections for the former are rectanguloid (7) or irregular (2). For the latter they are rounded (2) or biconvex (2). All but four tips are conical, the exceptions being pointed and flattened. Body modification for these implements varies from highly finished to unaltered. Assigned components include FN II (2), FN III (2), FN IV (2) and unassigned (8).

	mean	*stnd. dev.*	*min/max*	*n*
length	46.71	12.83	27-75	14
width	5.86	1.41	4-8	14
thickness	4.71	1.07	3-7	14
weight	1.54	1.16	0.4-4.7	14

Bipoints n = 16, Figure 34: a-d

Bone bipoints are less well made than points in the preceding classes. Although both tip and base are complete, in most cases bodies remain unmodified. None have medial constrictions suggestive of a fish gorge (Mitchell 1971: 202). Using size variation, large (9) and small (7) subclasses may be defined. Only four of the specimens could be assigned to a component. These include one each to FN II and FN III and two with FN IV.

Large Bipoints n = 9 — The tip element for large bipoints is conical on the majority with three having facets. Butt type is varied with conical (5), facetted-pointed (3) and wedge-pointed (1) forms present. Mid point cross sections are rectanguloid to square on three, rounded to biconvex on two and plano-convex, concavo-convex and triangular in the remainder.

	mean	*stnd. dev.*	*min/max*	*n*
length	69.00	6.22	58-77	9
width	8.00	2.24	5-10	9
thickness	5.22	1.30	4-7	9
weight	2.96	1.51	1.2-5.8	9

Small Bipoints n = 7 — The smaller bipoint version is also dominated by either conical (3) or facetted (2) tips. Exceptions here are one with a pointed and flattened tip and a second that is missing the distal end. On all, butt form is facetted conical. Midpoint cross sections vary between rectanguloid (3) and rounded (3) with a single triangular example. Few specimens have finished body segments.

	mean	*stnd. dev.*	*min/max*	*n*
length	46.50	3.67	42-53	6
width	5.43	1.27	4-7	7
thickness	4.29	0.76	3-5	7
weight	1.13	0.26	0.7-1.5	6

Sliver Points n = 11, Figure 34: l-n

Bone sliver points are based on small, thin bone splinters. Both bipointed (6) and unipointed (5) forms are present. In six cases, the specimen is manufactured from bird bone. For the majority of these points, polish extends over the entire body section while tips tend to be finely tapered and flat. Structurally, this group is poorly suited for piercing or perforating tasks and I would expect most to have functioned as barbs for composite fish hooks. All weigh less than 0.2 g. Four specimens have been broken. Bone sliver points are associated with FN II (6), FN III (3) and unassigned (2).

	mean	*stnd. dev.*	*min/max*	*n*
length	34.00	9.73	22-45	7
width	3.00	0.77	2-4	11
thickness	1.64	0.50	1-2	11

BONE AWLS

Splinter Awls n = 54, Figure 35: e, f

Splinter awls are based either on elongate sectioned bone fragments or bone splinters. They have polish or other modification restricted to the working end. Although the majority of specimens have formed conical tips (29), others have tips that are simply cut or natural fractures with a minimum degree of modification (12). A large number (23) have broken tips. All specimens possess use-wear sheen indicative of employment as awls. This class of implements is interpreted to be a group of expedient tools with minimal effort undertaken in tool manufacture. Component associations include FN I (11), FN II (8), FN III (4), FN IV (8) and unassigned (23).

	mean	*stnd. dev.*	*min/max*	*n*
length	71.29	24.09	30-126	34
width	10.83	4.23	3-25	47
thickness	5.39	1.64	2-10	54
weight	3.59	3.03	0.5-16.8	34

Formed Split Bone Awls n = 29, Figure 35: a-c

Similar in most respects to splinter awls, specimens within this class have the additional attribute of body abrasion. The extent of this modification varies from heavily polished examples to implements with sharp and rough edges that are smoothed over. On specimens retaining their distal working end, tips are conical (18) or pointed and flattened (3). On most, butt ends remain unfinished. One example has a butt that is wedge shaped with a straight basal margin and another is blunted straight. One specimen (172 × 13 × 7 mm) might have been classified as a facetted fixed point (Figure 35 a). Lateral margins for this piece are single bevelled and the ventral face is ground flat. This specimen has a conical tip and an unfinished butt. Another slightly anomalous specimen is bipointed. Use wear and body form characteristics are more similar to the formed awl class than those of earlier described bipoints. For the sample, component associations include FN I (8), FN II (5), FN III (4) and unassigned (12).

	mean	*stnd. dev.*	*min/max*	*n*
length	109.40	22.16	91-172	15
width	11.19	3.49	8-22	22
thickness	6.00	1.47	4-10	29
weight	6.24	4.00	2.8-18.6	15

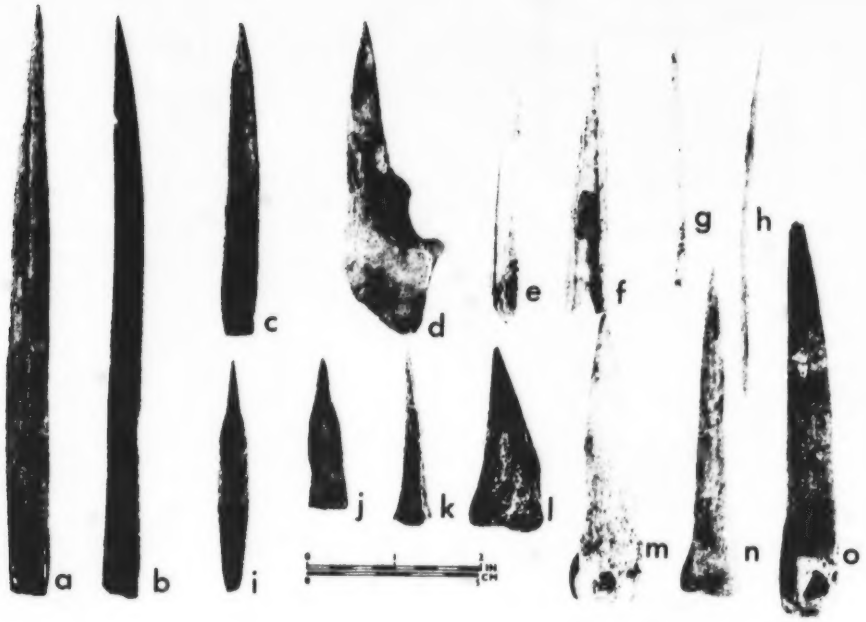


Figure 35. Bone Awls: a-c formed split bone awls; d ulna awl; e, f splinter awls; g, h bird bone awls; i-k miscellaneous formed awls; l-o metapodial awls. Assigned Components: FN I, b, i, j, l, n; FN II, a, c, e, f, h, k, m, o; False Narrows IV, g; Other, d.

Metapodial Awls n = 28, Figure 35: l-o

A large sample of awls has been manufactured from split metapodials. On several, articular surfaces were sufficiently intact to allow for species identification. With the exception of mountain goat as mentioned earlier, deer is the sole species present. This class can be equally subdivided into samples based on proximal and distal metapodial usage. Assigned components include FN I (9), FN II (11), FN III (1), FN IV (1) and unassigned (6).

Proximal Metapodial Awls n = 14 — Proximal end metapodial awls have the proximal epiphyseal surface formed as a butt. In eight cases, the articular end has been split while in the remainder it has been partially removed through abrasion. On only five are tips not fractured. Each of these is well formed and sharp. All specimens exhibit significant body abrasion.

	mean	*stnd. dev.*	*min/max*	*n*
length	101.80	13.81	85-122	5
width	19.71	6.19	13-38	14
thickness	14.36	4.36	5-23	14
weight	8.80	2.41	6.2-12.0	5

Distal Metapodial Awls n = 14 — Distal articulating surfaces have been employed as awl butts on 14 specimens. In all cases these have been split with further epiphyseal modification on seven examples. Body elements vary in intensity of grinding while tips, where present, are well formed. Again, only five of these elements are complete for quantitative description.

	mean	*stnd. dev.*	*min/max*	*n*
length	78.00	30.19	43-116	5
width	19.07	6.07	12-29	14
thickness	11.07	3.77	5-17	14
weight	5.64	2.94	2.4-10.3	5

Bird Bone Awls n = 11, Figure 35: g, h

Of the 11 specimens tentatively categorized as bird bone awls, only four can be considered complete. Four have fragmented proximal ends and three are without a tip. All examples are manufactured from bird long bones which, in eight cases, were unmodified with the exception of the functional end. For the remainder, the long bones have been sectioned. Tips, where present, exhibit varying degrees of polish. Component assignments include FN I (2), FN II (3), FN III (1), FN IV (1) and unassigned (4).

	mean	*stnd. dev.*	*min/max*	*n*
length	103.50	28.87	72-141	4
width	5.34	1.36	3-7	11
thickness	4.09	1.45	2-7	11
weight	1.90	1.47	0.6-4.0	4

Ulna Awls n = 2, Figure 35: d

A pair of deer ulnae have been manufactured into awls. Blades are short and sturdy with sharp, well formed, flat tips. On both, the butt end (proximal articulating surface) has been fractured. Neither has lateral blade edges modified in a manner suggestive of a bone knife or slitting tool. Measurements for the pair are 84 × 55 × 24 mm and 96 × 47 × 32 mm. Respectively, these specimens weigh 7.8 and 9.1 g. Only one could be assigned to a component, it being FN I.

Miscellaneous Formed Awls/Fragments n = 8, Figure 35: i-k

Three complete, three tip/body segments and two butt fragments cannot be placed within previous classes. Two of the complete specimens are similar in form (Figure 35 i, j). Each has a long, sharp conical point with bodies flattened on both the dorsal and ventral faces. In one case, body margins are slightly excurvate while on the other, they are straight and expanding. The third complete piece is formed from the distal section of what appears to be an ulna (Figure 35 k). It has a sharp, well formed tip with minimal abrasion on the body. Two of the tip/body fragments are similar to the initial pair with sharp conical points. The other has an abrupt "nipple-like" projection on the end of a heavily modified long bone section. Both butt fragments are sufficiently intact to indicate the former presence of a conical tip. Both are heavily ground and rounded in cross section. Component associations are FN I (2), FN II (2), FN III (1) and unassigned (3).

	mean	*stnd. dev.*	*min/max*	*n*
length	64.67	8.39	55-70	3
width	12.38	2.45	10-16	8
thickness	7.75	3.33	4-15	8
weight	2.63	1.23	1.6-4.0	3

OTHER PUNCTURING/SLITTING TOOLS

Miscellaneous Ulna Tools n = 17, Figure 36: a-c

In addition to awls, deer ulnae have been used as a base for a number of other implements including knives (5), a spatulate tool (1) and miscellaneous pointed objects (2). Modified butt fragments from nine additional tools could not be identified as to former function. As a class, these specimens have been assigned to FN I (1), FN II (2), FN III (3), FN IV (3) and unassigned (8).

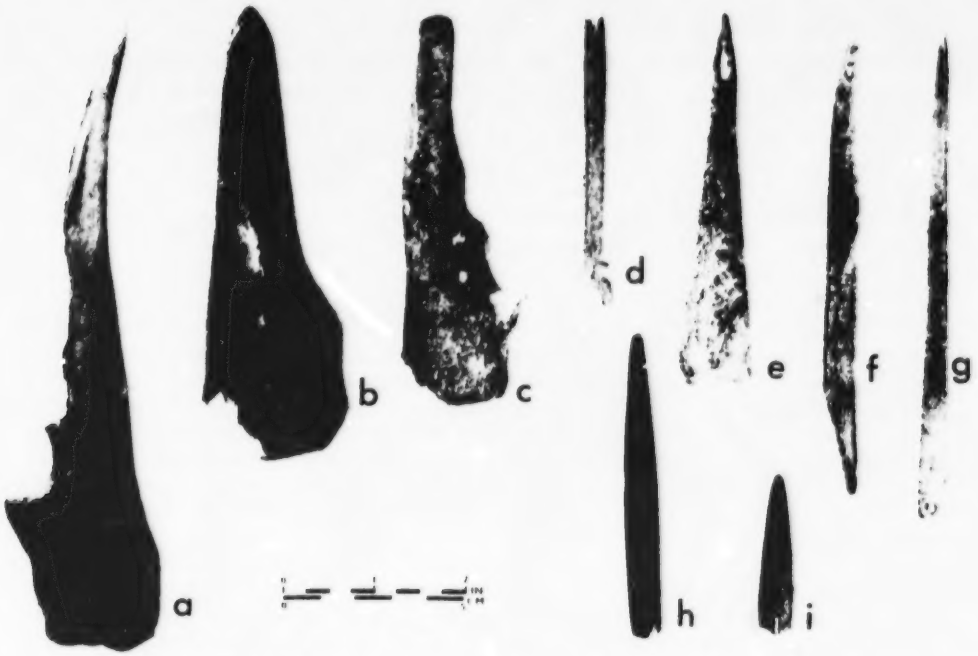


Figure 36. Ulna Tools, Bone Slitting Implements and Bone Needles: a-c miscellaneous ulna tools; d-g bone needles; h, i bone knives/slitting implements. Assigned Components: FN I, a, f; FN II, g; FN III, b; FN IV, c; Other, d, e, h, i.

Ulna Knives n = 5 — Ulna knives (after King 1950: 46) may be something of a misnomer for the present sample given the structural properties of the ulna. These specimens have long slender blades formed by the ulna shaft section. Each, aside from slight ventral abrasion on the "cutting edge" of the blade and point, has minimal modification. The sample is composed of four complete and one blade segment.

	mean	*stnd. dev.*	*min/max*	*n*
length (total)	162.5	15.3	146-181	4
length (blade)	101.40	12.03	90-117	5
width	36.50	2.38	34-39	4
thickness	19.75	1.50	18-21	4
weight	19.05	6.75	13.9-28.1	4

Other n = 12 — On two ulnae, shafts have been abruptly truncated and ground to a point. While extensive abrasion is found over the entire blade section, lateral margins are ground flat on one and cut and ground on the other. Articulating surfaces (proximal) are either broken or cut. Measurements for the two are: 129 × 40 × 80 mm, 29.8 g; and 100 × 27 × 23 mm, 15.1 g. Respective blade lengths are 80 and 62 mm. The only other intact ulna tool is a spatulate tipped implement (113 × 39 × 22 mm). Its blade has been truncated and formed into a slightly convex wedge. Use-wear striae run transversely. Percy (1975) labels similar implements as "creasers". Other modification, aside from the distal end, is absent. Blade length for the piece is 57 mm; it weighs 15.2 g. Finally, nine butt sections (ulna proximal articulating surface) with a portion of the blade left intact have evidence of being modified into tools. None could be conclusively identified as to former type.

Bone Knives/Slitting Implements n = 3, Figure 36: h, i

Three formed bone implements, two of which are complete, are classified as knives or slitting tools (Figure 36 h, i). Bodies are flat on both dorsal and ventral surfaces while lateral margins are tapered and thin. Tips on two are pointed and wedged. In form, this pair resembles the modern "letter opener". On the other, the tip is more blunt, being the intersection of one straight and one curved margin. All three specimens are manufactured from long bone splinters which have been heavily modified. Dimensions for the complete specimens are 85 × 9 × 5 mm and 44 × 13 × 3 mm. Respective weights are 3.6 and 1.9 g. None of these specimens could be assigned to a site component.

Bone Needles n = 17, Figure 36: d-g

Five complete and 12 fragments of bone needles were recovered. Based on eye placement, distal versus proximal, subclasses may be defined. This distinction may have a functional association. Specimens having distal perforations are extremely wide at the proximal end hampering, if not making impossible, a through motion. These specimens are analogous to the present-day dress maker's "bodkin". On the other hand, proximally perforated specimens (2) are slender and appear similar in their form to the modern needle. One midsection fragment, broken at the eye incision, may have had its perforation in the middle of the shaft. Component associations for needles include FN I (11), FN II (2) and unassigned (4)

Distal Perforated Needles n = 14 — Distal perforated needles are characteristically wide at the proximal end. While all are modified on this end to some extent, two are decoratively carved. Neither, however, has an identifiable subject. The dominant mode for eye perforation is a double incision technique although two may have been drilled and another both incised and drilled. On the four complete examples, tips are well formed and have varying degrees of use-wear polish.

	mean	*stnd. dev.*	*min/max*	*n*
length	134.25	33.5	103-181	4
width at eye	6.14	0.95	4-7	14
proximal width	14.00	3.61	9-20	11
thickness	4.10	1.10	3-7	10
weight	6.98	1.16	5.7-8.5	4

Proximal Perforated Needles/Fragment n = 2 — Only one of the two proximal perforated needles is complete. It (137 × 7 × 4 mm) is extremely well made, long, slender and round in cross section. The eye is biconically drilled while the tip is sharp and conical. The other example ((94) × 8 × 4 mm) is more poorly manufactured and is missing part of its proximal end. The eye has been placed through a double incision. The lateral margins are blunt and the cross section is rectanguloid. Weights for the two are 4.9 and 4.8 g respectively.

Wedges and Chisels

Bone Chisels n = 14, Figure 37: a, b

A large number of bone implements with pointed to convex tapered or beveled bits are broadly interpreted as bone chisels. Incorporated here are implements that, frequently, are referred to as bone fleshers, scrapers, bark pries or gouges. The total sample is based on land mammal long bone sections with all but three having body surfaces that are ground and polished. The bit edge for this sample is varied with two double tapered, four single tapered, four single beveled, one double beveled and three undetermined fragmentary examples. The poll or butt end is cut on six pieces, missing on another six and ground on two. Seven specimens are considered to be fully complete. This sample has been assigned to FN II (3), FN III (1), FN IV (1) and unassigned (9).

	mean	*stnd. dev.*	*min/max*	*n*
length	88.00	19.50	58-118	7
width	17.27	5.14	12-29	11
thickness	6.29	1.59	4-10	14
bit angle	37.27	7.20	25-45	11
weight	8.31	4.91	3-17.7	7

Bone Wedges n = 3, Figure 37: c, d

As a whole, wedges are distinguished from chisels by overall thickness and sturdiness. As well, all specimens are battered on the poll end suggestive of a wood wedge or heavy bark pry. Two specimens are manufactured of split land mammal long bone while the third is of sea mammal. The former pair measure 119 × 23 × 13 mm and 79 × 26 × 10 mm with respective weights of 26.0 and 16.8 g. The first has a single taper bit with an angle of 30 degrees; the bit on the second is double tapered with an angle of 40 degrees. The sea mammal bone specimen (95 × [26] × 19) is notable by the presence of three longitudinal saw grooves. Since one of the lateral margins is sawn, this implement may be in an initial stage of manufacture. It also might be a preform from which wedges were cut as needed. The bit element for this piece is double tapered with an angle of 60 degrees. It has a weight of 32.9 g. None of these specimens could be assigned to a component at the site.

Chisel/Wedge Fragments n = 4

Four fragmented sections of chisels or wedges have been identified within the assemblage. All are manufactured from sections of land mammal long bone and each has been finished to varied degrees. One retains a partial bit which is double tapered and possibly

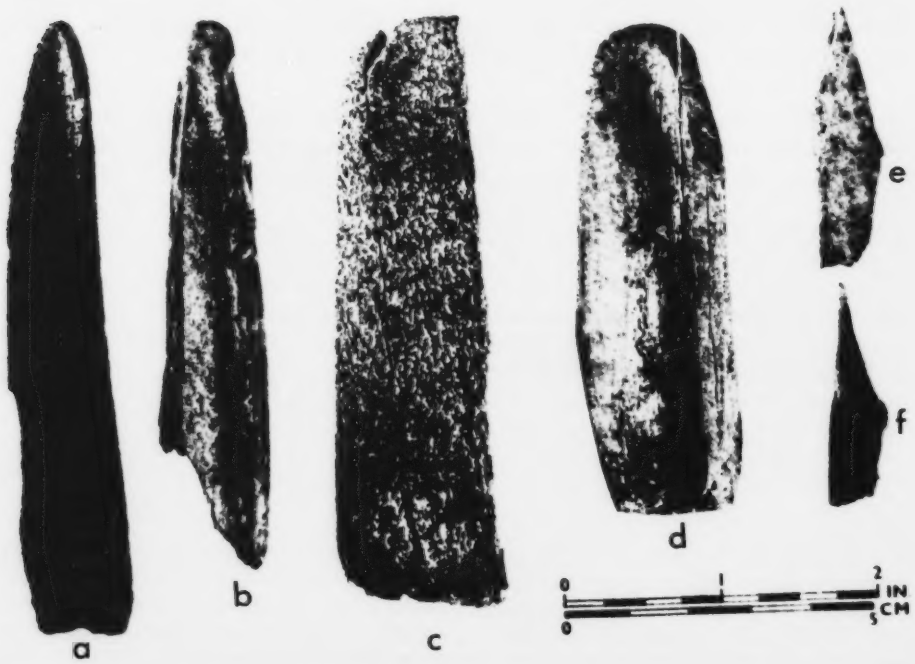


Figure 37. Bone Chisels, Wedges and Edge Tools: a, b bone chisels; c, d bone wedges; e, f bone edge chisel tools. Assigned Components: Other, a-f.

pointed. Another has a partial single tapered bit with two transverse incised lines across a plano-convex sectioned body element. This sample has a mean width of 19.5 mm and a mean thickness of 9.25 mm. Component associations include FN I (1), FN II (2) and FN IV (1).

Bone Edge Chisel Tools n = 5, Figure 37: e, f

Five implements, all sectioned land mammal bone, are distinctive through the possession of a functional edge created by the convergence of two flattened or blunted lateral margins. The resultant appearance is somewhat like a burin and I am tentatively identifying these as a form of chisel-like tool. All specimens lack major modification. On two, tips are formed while natural edges were employed on the remainder. All have indications of being used along the bit edge and one has a ground butt element. Component assignments include FN I (1), FN II (2) and unassigned (2).

	mean	*stnd. dev.*	*min/max*	*n*
length	63.40	21.07	37-80	5
width	12.20	2.85	10-17	5
thickness	5.20	1.64	4-8	5
weight	3.24	2.12	1.4-6.8	5
bit angle	31.00	13.87	20-55	5

Ornaments and Ceremonial Items

Bird Bone Tubes n = 11, Figure 38: e-g, i, j

Eleven bird long bones have been modified or cut in such a way as to suggest use as implements. Tentative identifications include two that are thought to be whistles, three are thought to be beads and a sixth is considered a drinking tube. The remaining five pieces are too fragmentary to infer function but do have a cut and polished lip on at least one end. Component associations include FN I (3), FN II (6) and unassigned (2).

Bird Bone Whistles n = 2 Figure 38 f — Bone whistles are identified by the presence of a cut notch located near the proximal end. Neither specimen appears complete. One has both ends broken and the other is without a distal segment. Measurements for the two are (82) × 12 × 11 mm and (72) × 11 × 9 mm, with respective notches being 21 × 4 mm and 6 × 4 mm. Both have been polished along the shaft. Neither has been decorated.

Bird Bone Beads n = 4 Figure 38 i, j — Four complete bird long bone sections are interpreted as tube beads or bead spacers. All but one have proximal and distal edges ground smooth with extensive body polish. The exception has one end ground and the other cut. All are roughly ovoid in cross section.

	mean	*stnd. dev.*	*min/max*	*n*
length	20.50	6.14	15-28	4
width	11.75	2.22	10-15	4
thickness	10.75	0.96	10-12	4

Other Bird Bone Tubes n = 5 Figure 38 e, g — The single piece thought to be a drinking or sucking tube is slightly longer and more slender than other specimens. One end is cut and polished and the other is broken. Abrasion extends over the body. Measurements for this piece are (87) × 9 × 8 mm. This specimen might also be a fragment of a whistle. The five tube fragments cannot be interpreted as to use. One is decorated with a series of parallel inscribed lines on its circumference. These fragments have a mean width of 9.50 mm and a mean thickness of 6.50 mm.

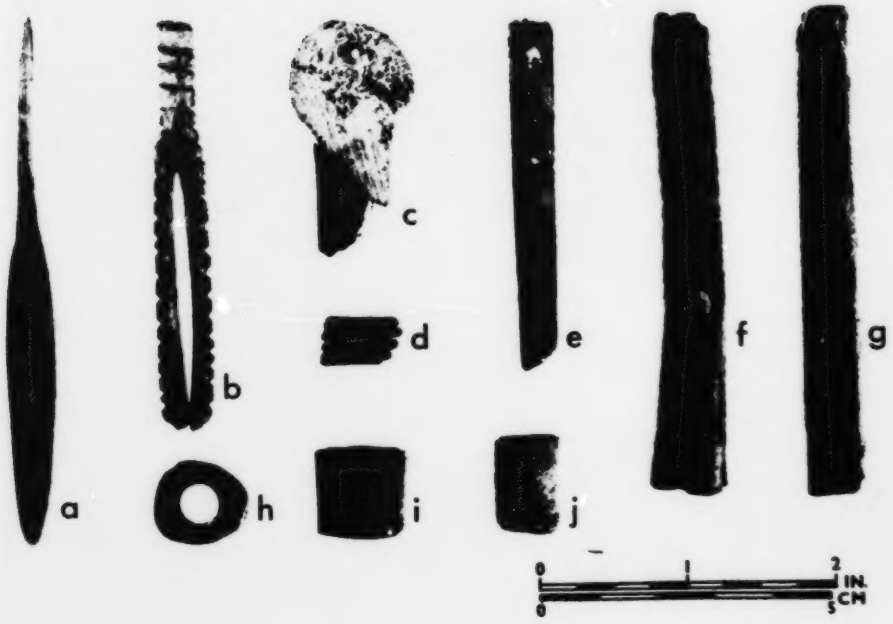


Figure 38. Bone Pin, Tubes, Bead and Other Inscribed or Perforated Specimens: a blanket pin; b, d miscellaneous inscribed bone pieces; c perforated bone piece; e-g, i, j, bird bone tubes; h bone bead. Assigned Components: FN I, a, e, f, i; FN II, c, g, h; FN III, d; Other, b, j.

Bone Beads n = 2, Figure 38: h

One complete and a fragmentary bone bead specimen were recovered. Both have a biconically drilled hole with a 7 mm diameter and both are roughly circular in outline form. The outer circumference is ground flat. The complete example has a 14 mm overall diameter and a 5 mm thickness. The fragment is 3 mm thick. Both specimens are associated with FN II.

Bone Nose Ring n = 1

A bone ring with proximal spurs for nostril insertion is unique within the assemblage. It is complete and well made. The measurements for this piece are 25 × 26 × 4 mm. Neck width at the base of the spurs is 12 mm and spur length is 6.6 mm. Each spur is 4 mm wide and separated from the other by a minimum of 4 mm. The ring's symmetric central portion is biconical and has a 10 mm diameter. This specimen weighs 2 g. It has not been assigned to a site component.

Blanket Pin n = 1, Figure 38 a

A highly polished bone pin with a long slender shaft and an excurvate flared base is tentatively identified as a blanket pin. This piece (93 × 8 × 2 mm) has a sharp, well formed conical tip which is the apex of a 39 mm long neck that is rounded in cross section. The proximal element is flat on both dorsal and ventral faces and the basal margin is convex. This piece has been recovered from deposits associated with FN I.

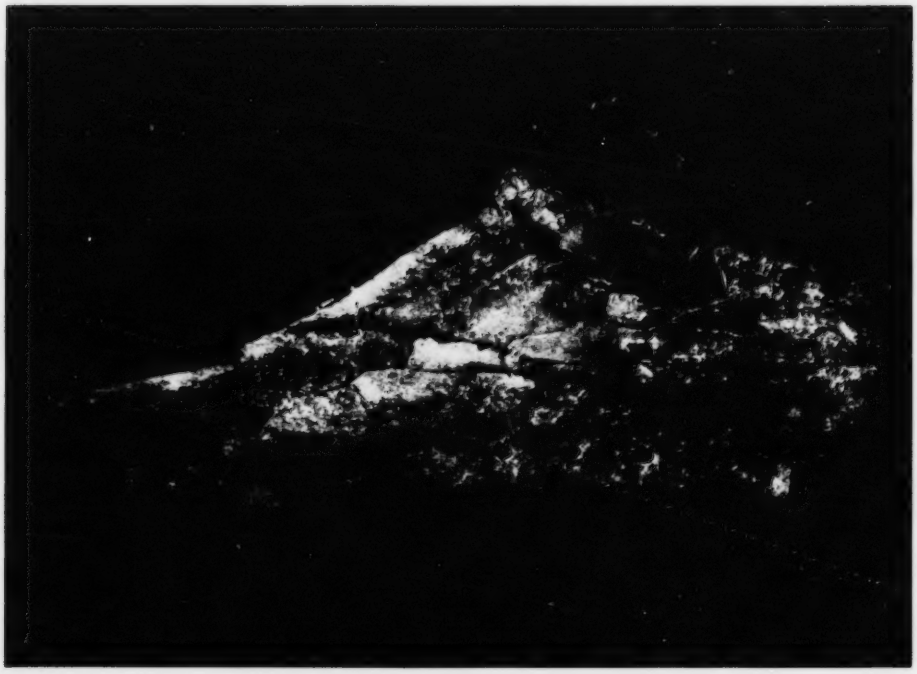


Figure 39. Whale Bone Armlet. Assigned Component: FN I.

Whale Bone Armlets n = 2, Figure 39

In association with Burial 52, these specimens were found wrapped around each of the individual's humeri. Both specimens, manufactured from whale scapula, are similar in form[1]. The lower segment that accomodates the arm is semi-cylindrical with a U-shaped biconvex cross section. One side of this lower portion extends to a convex tip that would have projected beyond the individual's shoulder. With one of the lateral margins being excurvate and the other incurvate, this has a wing-like appearance. The margins of these specimens are perforated at 20 to 30 mm intervals. These perforations may have been associated with either lashing or a means by which other decoration was attached. One specimen is 370 × 160 × 10 mm and the other is 400 × 185 × 10 mm. In their shape and their position in the burial, these armlets are believed to be part of a dancing costume. With arms bent, they provide the imagery of whale fins. Burial 52 and the armlets are assigned to the FN I component.

Miscellaneous Perforated Bone Pieces n = 5 Figure 38: c

Five artifact fragments have a single biconically drilled hole while one other has two. Two specimens, one scapula piece and a rib segment, are likely pendants. Another specimen, having a perforated flattened circular proximal end and a parallel-sided neck, may be a pendant fragment (Figure 38 c). The fourth fragmentary piece is a highly polished metapodial with a hole drilled through the distal epiphyseal margin and a transverse line inscribed on the shaft. The functional end has been broken. Based on appearance, it could have been employed as a bone needle (proximal perforation) or bone awl. The final specimen is a

[1] These specimens were on display and inaccessible to me. Their description has been provided by Lori Graves, formerly of the B.C. Provincial Museum.

scapula segment with two adjacent biconically drilled holes (diameter = 4 mm). There is no identifiable function for this piece. Assigned components include, FN I (1), FN II (2), FN III (1) and unassigned (1).

Miscellaneous Inscribed Bone Pieces n = 3, Figure 38: b, d

A piece of worked scapula with a number of etched lines, a fragment of what may be a comb, and a peculiar incised carving are included in this category. The scapula segment has a curved worked edge and a broken distal section. On both the dorsal and ventral faces are several straight scratched or incised lines. This specimen appears to be part of a larger drawing or possibly a pendant. Resembling a broken double toothed comb with snapped tines (Figure 38 d), the second example has a series of six transverse lines inscribed across the ventral and dorsal surfaces. Each of the toothed edges has been incised and the broken stubs of four teeth (?) are present. This specimen measures (14) × 9 × 2 mm with a maximum separation of 2 mm between teeth. The final piece ((71) × 10 × 5 mm) is a long slender bone section which has a double incised central perforation (39 × 2 mm) (Figure 38 b). Its surfaces are inscribed by a series of parallel transverse lines (18). A function for this piece is open to interpretation. Only the comb fragment has been assigned to a component, namely FN III.

MISCELLANEOUS BONE ARTIFACTS

Bone Fish Hook Shanks n = 2, Figure 40: h

Both bone fish hook shanks are fractured and missing the line attachment mechanism. One specimen ((25) × 8 × 4 mm) has a straight sided basal element grooved for barb insertion. This moves on to a well defined flattened shaft that is curved. The other example ((66) × 10 × 10 mm) does not have the distinctive base/shank separation line but is recurved with a channelled groove running the length of the dorsal surface. Both specimens are analogous to the historic salmon hook. Bone sliver points are thought to be the most suitable barb for insertion. One specimen is associated with FN I and the other FN II.

Scapula Triangles n = 4, Figure 40: e, f

Triangular cut pieces of scapula are often found in archaeological sites on the central coast of British Columbia (Carlson 1972, 1976; Carlson and Hobler 1976). In these assemblages they have been referred to as scapula points to describe form. An identification of function has not been made. Three complete and a fragmentary specimen are present. Component associations include FN I (1), FN IV (2) and unassigned (1).

	mean	*stnd. dev.*	*min/max*	*n*
length	46.33	15.89	28-56	3
width	26.00	11.58	16-37	4
thickness	1.75	0.96	1-3	4

Worked Ribs n = 5, Figure 40: b, c

Five ribs, four of sea mammal and one of land mammal, have been ground smooth into a set of implements with no obvious function. Two are complete with both ends finished. These specimens measure 91 × 22 × 10 mm and 90 × 18 × 5 mm. They have respective weights of 18.7 and 11.1 g. The remainder of the sample have one end either unfinished or broken. Cross sections for three are biconvex and the others biplano. Curved profiles are present on two. The first of the complete specimens is associated with FN I while the others have not been assigned to a component.

Bone Rods n = 2, Figure 40: a

Although neither specimen is compelete, both are distinctive within the assemblage by being fragments of long, slender, cylindrical bone rods. One specimen ((161) × 6 × 6 mm) retains an intact blunt conical butt (?) while the other ((103) × 9 × 4 mm) has its base single

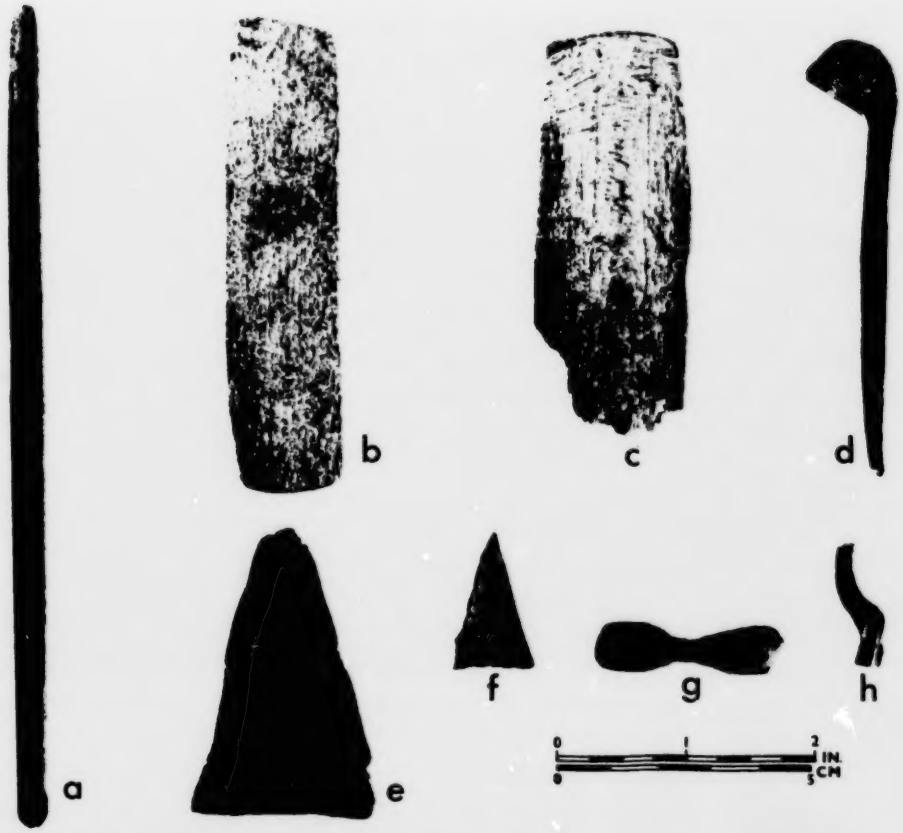


Figure 40. Miscellaneous Bone Artifacts: a bone rod; b, c worked ribs; d, g miscellaneous specimens; e, f scapula triangles; h bone fish hook shank. Assigned Components: FN I, b, d , e; FN II, g, h; FN IV, a, f; Other, c.

beveled and straight. Either might be considered as harpoon foreshafts or fixed lance point fragments (after King 1950: 48; Drucker 1943: 55). One is associated with FN II and the other with FN IV.

Miscellaneous Ground Bone Artifacts n = 8, Figure 40: d, g

Falling within the miscellaneous grouping are eight artifacts. Two, both rectangular pieces of bone, are completely worked on all margins. Measuring 19 × 4 × 2 mm and 42 × 5 × 4 mm, the latter is marked by facetted margins. Neither has an obvious function. Also fully shaped and polished is a bone figure-eight form (Figure 40 g). Both end margins are rounded, intersecting at a medial constriction. In size, it is 38 × 10 × 3 mm. Again, a functional utility cannot be identified. Two fragments of sea mammal bone, both appearing to have come from circular artifacts, are the fourth and fifth specimens within the class. I could not determine whether these were fragments of a single implement or separate items. One has been deeply cut or incised on its dorsal face. Measurements for the two are (37) × (21) × 11 mm and (39) × (16) × 9 mm. Of the next pair of miscellaneous artifacts, neither could positively be identified as bone. For both, the base material is extremely dense and the possibility of it being ivory cannot be ruled out. The first seems to be the end section of a broken rod ((58) × 10 × 9 mm). However, it differs significantly in diameter from the earlier described slender specimens. Two inscribed circumferential lines are placed on the shaft

section while the butt is rounded blunt. The piece weighs (8.5) g. The second (76 × 7 × 6 mm) specimen, on initial examination, was classified as a bone arming tip. It has a long slender conical point which is sharp and well formed. There is an abrupt shoulder moving on to a cylindrical flat bottomed butt. The diameter of the butt is approximately 2.5 times the size of the neck. The specimen weighs 3.9 g. Finally, the last miscellaneous artifact could be the proximal end of a deer mandibular pin or awl (Figure 40 d). The functional end is missing. Completely polished, the piece measures (88) × 18 × 7 mm. Miscellaneous specimens are associated with FN I (4), FN II (2), FN III (1) and FN IV (1) components.

Miscellaneous Artifact Fragments and Cut Bone

Bone Point/Awl/Piercing Tool Fragments n = 166

A number of artifact fragments could not be placed within a tool category beyond a general bone point-barb-awl-needle-other piercing tool class. Included are 82 tip and base sections and 84 medial fragments. Having a cumulative weight of 72.50 g (mean = 0.93), the tip/base sample is primarily conical in form although a few facetted and polished splinter points were also noted. Medial segments vary in cross section from irregular to symmetrically rounded. They have a cumulative weight of 168.0 g (mean = 2.02). All tip, medial and base pieces are of land mammal bone.

Sectioned/Cut/Sawn Bone Detritus n = 183

A large quantity of bone detritus was accessioned into the False Narrows catalogue as being culturally modified. While it is possible that a number of specimens may be fragments of unformed tools, the majority are simply viewed as cut, sawn or sectioned bone debitage. Included are 15 bird bone fragments (19.6 g), 17 pieces of sea mammal bone (438.3 g) and 152 land mammal bone specimens (413.8 g). Pieces generally vary from small long bone splinters to an entire scapula. One specimen is a roughly blocked out section of the epiphyseal surface of a whale vertebra (162 × 40 × 16 mm).

ANTLER ARTIFACTS

Fixed Antler Points

Unilaterally Multiple Barbed Points n = 48, Figure 41: a-g

As with bone points, barbed antler points from False Narrows have been analysed and classified by McMurdo (1972). Aside from material of manufacture, fixed points of bone and antler are reasonably similar in form. Of McMurdo's types, three are present. These are square enclosed barb points (Type II), low straight extended barb points (Type VII) and points with high extended barbs (Type IX). I have added a class having low straight enclosed barbs, a miscellaneous class and a category of fragments. Barbed antler points and fragments, as a sample, have been assigned to FN I (14), FN II (13), FN III (4), FN IV (1) and unassigned (16).

Points with Square Enclosed Barbs n = 5 — Five specimens, all fragments (2 tips, 2 midsections), comprise the sample of points with square enclosed barbs. Four specimens, like their bone counterparts, have regular, closely situated barbs. The exception is crudely made with different sized barbs (n = 5) at irregular intervals along the blade. All profiles for this subclass are straight. One tip is conical and slightly fractured, the other is pointed and wedged. A remnant mean width of 8.60 mm and a mean thickness of 5.20 mm characterizes the sample. Component assignments include FN I (1), FN II (1), FN III (1) and other (2).

Points with Low Straight Extended Barbs n = 10, Figure 41 a, c, g — The low straight extended barb class has four complete, or near-complete, examples. Also present are two tip sections and four medial fragments. All specimens possess a straight profile with barbs either closely placed (7) or isolated (3). Three of the complete examples have barbs that are closely

Figure 41. Antler Points: a-g unilaterally barbed points; h, single barbed point; i nonbarbed point. Assigned Components: FN I, a, b, d-g, i; FN II, h; Other, c.

spaced with ten barbs on one, and three and two on the others. The fourth complete specimen has three isolated barbs (Figure 41 c). All bases are well formed conical points. For most, the distal tip appears pointed and flattened. Component associations are FN I (3), FN II (3), FN III (1) and other (3).

	mean	*stnd. dev.*	*min/max*	*n*
length	101.00	21.51	80-128	4
width	10.20	0.79	9-11	10
thickness	6.20	0.79	5-7	10
weight	4.20	0.77	3.1-4.9	4

Points with High Extended Barbs n = 5 — This subclass has four tip fragments and a midsection. All specimens have a straight, close, barb application spaced at regular intervals. Two tips are roughly conical and the remaining two are flattened. The body fragment, in general size, is larger than the remaining pieces. It is wider (17 mm) and thicker (9 mm) than the others. This specimen might be a harpoon body fragment. All profiles are straight. Two specimens are affiliated with FN I and the remaining three are unassigned.

Points with Low Straight Enclosed Barbs n = 5, Figure 41: d-f — This subgroup has two complete specimens, two bases and a midsection. Characteristically, barbs are low, straight and enclosed. On three, these are closely spaced. The remainder are isolated. One of the complete specimens has three barbs and the other two. Respectively, these specimens measure 85 × 9 × 5 mm and 105 × 10 × 5 mm with weights of 2.7 and 3.5 g. The sample as a whole has a mean width of 8.8 mm and a mean thickness of 5.4 mm. Bases, where present, are long, slender, conical points. Tips are both conical and flattened. With the exception of one, which is slightly curved, all profiles are straight. Component associations include FN I (4) and FN II (1).

Miscellaneous Points n = 3 , Figure 41: b — One complete and two basal fragments are incorporated as miscellaneous. The complete specimen (116 × 13 × 6 mm) has a unique barb type intergrading between a square and straight form (Figure 41 b). The six barbs are extended, high and closely placed at regular intervals. The tip is flattened while the butt is conical. This specimen is one of the few to have a truly curved profile. The remaining two specimens are base fragments. One ((80) × 12 × 6 mm) has a single extended barb almost curved in outline form and a slightly curved profile. The other ((72) × 12 × 7 mm) is straight in profile with four square enclosed dense barbs. On both fragments, bases are conical. The complete point and one of the fragments are associated with FN I; the other could not be assigned to a component.

Fragments n = 20 — A large number of barbed point fragments could not be classified to type. Represented are 14 medial fragments, two bases, two tips and two isolated barbs. All specimens have either a single barb or its remnant. Where determined, these were straight in eight cases and square in five. All seem to have been low and were probably enclosed. With one exception, profiles are straight. The two bases are both slender and conical. Component associations include FN I (2), FN II (8), FN III (2), FN IV (1) and other (7).

Single Barb Point n = 1, Figure 41: h

A single antler unibarb (McMurdo 1972, Class IV, Type I), thicker than its bone counterpart, was recovered. This specimen has a single straight extended barb on the distal end. The point apex is fragmented but would seem to have been conical as is the basal element. The body is biconvex in section and has a straight profile. This specimen is 63 × 12 × 6 mm and weighs 2.1 g. This specimen has been assigned to FN II.

Unbarbed Fixed Antler Points n = 2, Figure 41: i

Two complete unbarbed antler points, both unique, are present. The first (124 × 12 × 7 mm) is long and slender with parallel, slightly excurvate sides and a conical tip (Figure 39 i). Lateral margins are flat providing a rectanguloid cross section. The base is straight and blunt. At regular 10 mm intervals down the dorsal face are a series (n = 10) of parallel transverse incisions. Interpretation of the second specimen (66 × 13 × 6 mm) as a point is tentative. It has a roughly excurvate blade which, on the distal end, is tapered thin, providing not only a sharp tip but also sharp lateral margins. The base is wedged and slightly convex. In longitudinal section, this example is trianguloid. Respective weights for the points are 8.0 and 4.0 g. The first specimen is assigned to FN I, the latter FN II.

Antler Harpoons

Noncomposite Harpoons and Fragments n = 6, Figure 42: a-f

Noncomposite harpoons are distinguished from fixed points by the possession of a line guard indicating their detachable nature. Line guards are present on five specimens within this class. This includes two complete harpoons and three basal segments. A tip segment, on the basis of size, has also been included. Each specimen is different.

The first of the complete specimens has a neck form of line attachment with a large rectangular butt. Its two unilateral barbs are high, extended and convex, and the tip is wedge shaped (Figure 42 b). This specimen has been classified by McMurdo (1972) as Type IIc. It measures 129 × 29 × 11 mm and weighs 23.6 g. The other complete specimen (176 × 33 × 13 mm) is also unilateral but has three high extended straight barbs (Figure 42 a). The tip is wedged and is formed by a continuation of the last distal barb. The base is roughly rectangular with an ovoid cross section. The line attachment element is a notched double tabular form which, on one side, is partially fractured. The specimen weighs 30.8 g and has been classified as a Type Ic (McMurdo 1972). The former specimen is assigned to FN II, the latter FN I.

Of the three basal sections, only one ((87) × 25 × 9 mm) has a barb remaining intact; it is a high enclosed square type (Figure 42 d). For this specimen, the base is pointed and blunt,

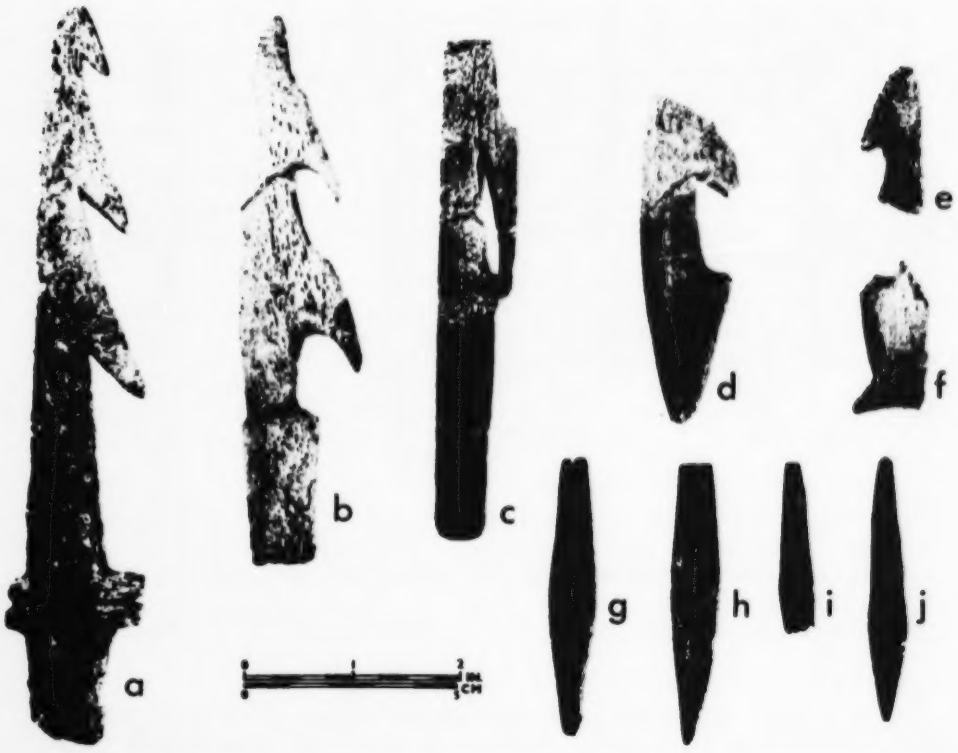


Figure 42. Antler Harpoons: a-f noncomposite harpoons and fragments; g, h channeled toggling harpoon valves; i, j slotted toggling harpoon valves. Assigned Components: FN I, a, c; FN II, b; FN III, h, j; FN IV, g; Other, d-f, i.

and a single shoulder serves as the line attachment mechanism. The second basal section ((119) × 19 × 9 mm) also comes from a unilaterally barbed form (Figure 42 c). Its lateral margins are straight and ground flat with the exception of the line guard area. The basal edge is slightly blunt and convex. Line attachment is facilitated by the presence of an elongated rectanguloid line guard which has an incised slot 25 mm long. The final specimen, ((38) × (18) × (5) mm), has a concave basal edge with small lateral spurs on either margin (Figure 42 f). Remnants of a central biconically drilled hole represents the former line attachment mechanism. The tip fragment, because of its overall size and lack of similarity with the fixed point sample, is categorized as a harpoon. It has a single straight extended barb and a square to round cross section (Figure 42 e). Measurements are (36) × (15) × 10 mm. Only the basal section with the incised slot type of line attachment mechanism has been associated with a component, it being FN I.

Antler Toggling Harpoon Valves n = 20, Figure 42: g-j

Within the antler toggling harpoon valve class, two forms are identified. These are channeled valve specimens and valves with slots. An assortment of valve fragments are also present. This class is associated with FN I (1), FN II (2), FN III (5), FN IV (5) and unassigned (7) components.

Channeled Valves n = 9, Figure 42: g, h — Channeled valves for toggling harpoons are characterized by an incised groove along the distal spur for the insertion of an arming tip. Six

complete specimens and three fragments comprise the sample. On four, the channel grooves fully extend over the distal spur length which, itself, is truncated by a straight margin. On three others, the distal spur tapers to a point, as does the channel. While only one valve has a distinctively cut lashing groove on the dorsal surface, one other exhibits extensive lashing wear along the proximal spur. Channeled valves are associated with FN I (1), FN III (3), FN IV (2) and unassigned (3) components.

	mean	*stnd. dev.*	*min/max*	*n*
length (total)	62.67	6.65	55-70	6
length (channel)	21.60	4.89	16-27	7
width	9.89	1.69	7-12	9
thickness	6.11	1.17	4-8	9
weight	2.68	0.83	1.3-3.6	6

Slotted Valves n = 2, Figure 42: i, j — The only examples of slotted toggling harpoon valves from False Narrows are almost identical in form. Both are scarfed on the ventral face of the distal end for the acceptance of a flat-based cutting blade. Both have been grooved on the exterior dorsal surface to facilitate lashing. On one, this groove is extremely pronounced. Finally, both specimens share a deep socket. One example is missing its proximal spur while, on the other, it is long and flat. Measurements for the complete valve are 66 × 10 × 6 mm; weight is 2.5 g. The fragment is (42) × 8 × 6 mm. The complete specimen is assigned to FN III; the other is left unassigned.

Valve Fragments n = 9 — Nine valve fragments, almost all proximal spurs, could not be identified as to type. While none have a defined dorsal lashing groove, three possess light traces of lashing wear. Spur tips range from pointed to pointed convex. A mean width of 9.44 mm and a mean thickness of 5.00 mm is characteristic of these specimens. Component associations include FN II (2), FN III (1), FN IV (3) and other (3).

Antler Wedges

Tine Wedges n = 13, Figure 43: d

Splitting wedges manufactured from antler tine are represented within the assemblage by five complete and eight fragmentary specimens. On all but one, the butt element has been heavily battered. Bits are also crushed and pared though to a lesser degree. By far the most predominant form of bit is a single tapered edge (6). One is double tapered and another seems intentionally blunted. The bit horizontal view, in all cases, is symmetrically convex. One specimen is distinctive within the collection. It has been made from a complete antler with the pedicle surface serving as a butt. On this specimen, one tine has been removed and the bit is manufactured by splitting the remaining tine and grinding it smooth. Since this specimen has no signs of wear, it may be in a preform state. Assigned components include FN II (2), FN III (5), FN IV (4) and unassigned (2).

	mean	*stnd. dev.*	*min/max*	*n*
length	165.60	84.5	82-288	5
width	36.75	10.70	21-58	8
thickness	30.90	15.93	19-73	10
weight	91.50	74.68	44.8-221.5	5

Split Beam Wedges n = 30, Figure 43: a-c

More numerous than tine wedges, beam wedges include six relatively complete implements, 23 fragments with either a bit or poll, and a single midsection piece. Bits, where present, are single tapered (20), single beveled (8) or double tapered (2). Planar views are symmetrically or asymmetrically convex and the bit angle has a mean of 33.60 degrees. All butt elements that have not been fractured are heavily battered. A functional distinction

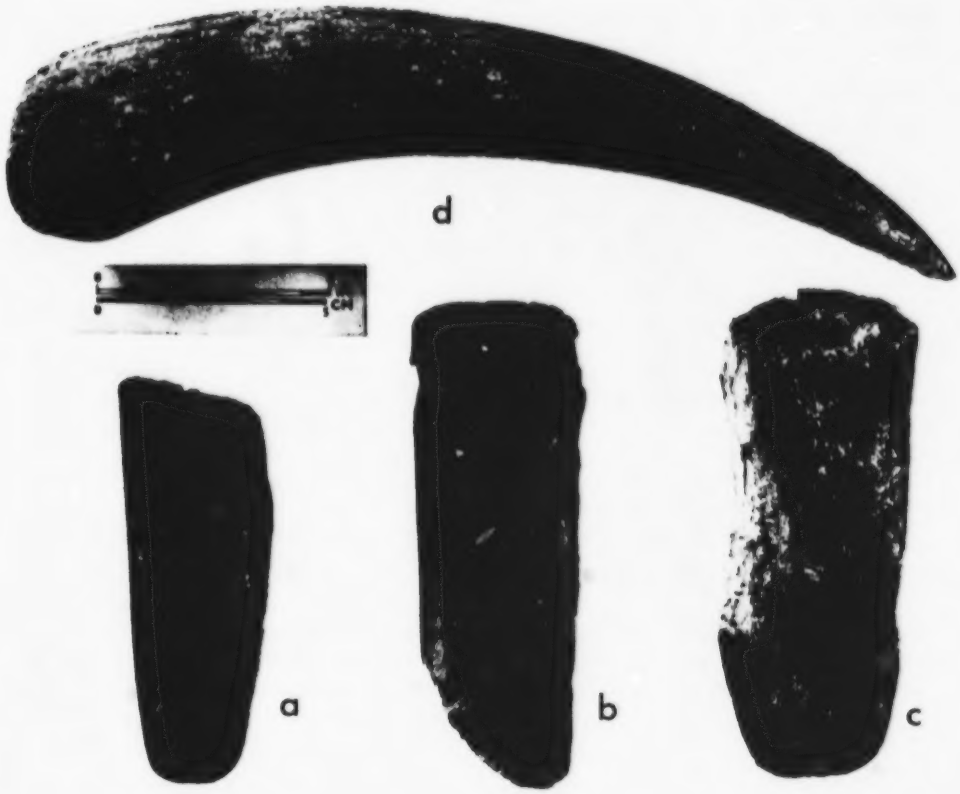


Figure 43. Antler Wedges: a-c large beam wedges; d tine wedge. Assigned Components: FN II, b, c; Other, a, d.

between beam and tine wedges cannot be made. Both are heavy splitting tools predominantly employed in the woodworking industry. Beam wedges are associated with FN I (4), FN II (8), FN III (4), FN IV (2) and unassigned (12).

	mean	*stnd. dev.*	*min/max*	*n*
length	107.67	32.56	82-171	6
width	38.00	7.07	23-49	14
thickness	17.48	8.78	10-41	21
weight	49.83	20.86	29.4-71.1	3

Ornaments

Antler Tine Pendants n = 6, Figure 44: b, c

Six antler tine pendants have been identified. Four have their distal tips girdled for stringing and the others are perforated. All but one of the girdled specimens is unfinished or broken. On these, the pendant base remains unmodified. The finished example has been cut flat. On two, a double incised line produces a double knob affect on the tip portion. The remaining pair has a single incision. Other modification is minimal. The complete piece is 64 mm long while a mean width of 15 mm was recorded for the total girdled sample. These pendants have been assigned to FN I (2) and FN II (2) component affiliations.

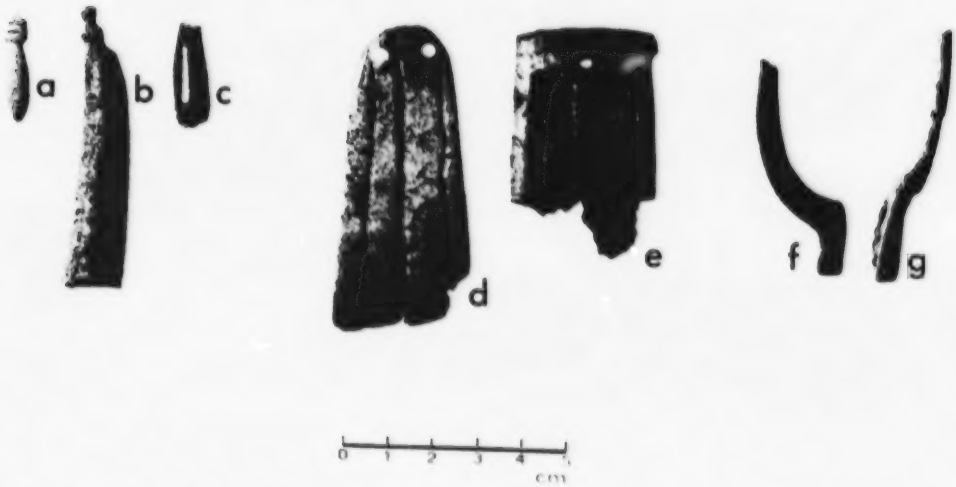


Figure 44. Antler Pendants and Fish Hook Shanks: a, d, e other pendants; b, c tine pendants; f, g fish hook shanks. Assigned Components: FN I, b, c, f, g; FN II, a, d, e.

A well polished tine with a flat abraded base was intended as a pendant (Figure 44 c). However, as the hole was being drilled, the specimen fractured. Two parallel incised lines are cut into the basal element circumference. Measurements for the piece are (25) × 9 × 9 mm. A second perforated tine could also be a pendant. It remains unmodified with the exception of a flat ground base and a uniconical drilled hole (diameter = 3 mm) 26 mm from the tip. This specimen measures 68 × 20 × 20 mm. The first specimen is associated with FN I, the second FN II.

Other Antler Pendants n = 5, Figure 44: a, d, e

In addition to those manufactured from antler tines, five other perforated antler pendants were recovered. Two of these are plain forms while the remainder are more elaborately executed. The plain forms include a complete specimen with a "tear drop" shape (45 × 16 × 3 mm, 2.4 g) and a fragmentary triangular example ((23) × (14) × 4 mm). Both have unifacially drilled perforations on the proximal end with respective diameters of 4 and 3 mm. The tear shape form has all lateral edges ground smooth.

The first of the more elaborate pendants (69 × 31 × 4 mm, 5.5 g) has a formed convex proximal end with straight slightly expanding lateral margins and a straight base (Figure 44 d). Three incised lines, parallel to the lateral margins, radiate from the rounded edge on the dorsal surface. Intervening between one pair of these lines are several smaller transverse cuts. The pendant is strung by means of two drilled holes (diameters = 3 and 4 mm) on the proximal element. The second specimen is missing the distal end (Figure 44 e). Two inset rectangles run the length of the dorsal face. Being recessed, these share a common medial ridge with other perimeters raised. Near the proximal margin is a centred perforation 3 mm in diameter. A slight spur is also present on the right proximal shoulder. The piece measures (52) × 33 × 5 mm. This pendant, as well as the previously described one, may have been interpreted as brow band elements (after Calvert 1970). The final example has a tear shaped distal element with a rectangular incised crown on the proximal end (Figure 44 a). Attachment of a line was facilitated through a transverse proximal perforation. This has fractured leaving a pair of ear-like projections. The rectangular crown was cut by two parallel lines around the circumference. This specimen measures 26 × 6 × 4 mm and weighs 0.8 g. All specimens within this class are associated with FN II.

Inscribed Antler Tines n = 2, Figure 45: a, b

A pair of elk antler tines, both decorated with incised parallel lines, were found in association with Burial 52. The first tine, which is complete, has two sets of incised lines. One set, including four lines, is on the tine tip and the other, with three lines, is on the shank. The specimen measures 325 × 39 × 33 mm and weighs 243.5 g. The second piece has the tine point removed. It also has two sets of lines around its circumference. Again, one is on the proximal portion (n = 4) and the other (n = 4) on the shank. This artifact is 249 × 42 × 31 mm in size and weighs 222.5 g. Since these specimens lack any indication of having been used as tools (antler billet, digging stick handle) and in consideration of their burial associated context (beetle effigy pendant, whalebone armlets) they are interpreted to be elements of ceremonial paraphernalia. Both are affiliated with FN I.

Inscribed Artifact Fragments n = 9

Fragments from nine artifacts with incised designs are present within the assemblage. The majority are believed to be fragments from pendants or similar ornaments. One, however, is the remnant of a long narrow band ((60) × 23 × 1 mm). It is decorated on its proximal end by a series of incised dots and, on the distal end, with an incised curved design. This specimen is likely an arm or brow band fragment. All other specimens have varied etchings including straight and curved lines, a circle, and the dot pattern already mentioned. A stylized Northwest Coast eye form may be present on one of the smaller sections. Associated components include FN I (1), FN II (1), FN III (3) and unassigned (4)

MISCELLANEOUS ANTLER ARTIFACTS

Antler Fish Hook Shanks n = 2, Figure 44: f, g

Both antler fish hook shanks are missing their line attachment mechanism. These specimens are similar in construction. They have a predominantly straight grooved rectanguloid base which moves onto a curved shank. Measurements for the pair are (51) × 20 × 7 mm, 2.3 g and (59) × 10 × 7 mm, 1.9 g. Of the small bone points recovered from False Narrows, the splinter point class would be the most suitable for use with these shanks. Both shanks are assigned to FN I.

Antler Haft and Fragments n = 6, Figure 45: c

No specimen can conclusively be identified as a tool haft. However, all are cut and ground in a manner suggesting this function. Only one has a full beam cross section (Figure 45 c). This is interpreted as a sleeve for an adze or similar implement. Measuring 44 × 41 × 23 mm, butt end margins are tapered smooth and the distal section is cut flat. It weighs 14.6 g. Of the remainder, all are longitudinal segments with two having been intentionally split. These could be interpreted as two piece sleeves. On both, one end margin is beveled and the other is cut flat. The haft sample has been associated with FN II (2) or left unassigned (4).

	mean	*stnd. dev.*	*min/max*	*n*
length	47.50	16.57	24-70	6
width	32.40	7.50	25-41	5
thickness	17.67	6.81	10-23	3
weight	14.30	6.36	7.8-20.5	3

Miscellaneous Antler Artifacts n = 2

Two specimens, neither of which has a definite functional identification, are included as miscellaneous. The first is an antler tine tip ground on all surfaces. Having a flat smooth base, it appears as a symmetrical cone. This implement weighs 7.6 g with measurements of 40 × 17 × 6 mm. This example might be interpreted as a bunting tip for a bird arrow. The second specimen is an antler beam segment ((42) × 24 × 8 mm) which has been cut and ground into a rectanguloid form. One end is convex and the other curves to a point. The first is assigned to FN II (1) and the latter to FN III (1).

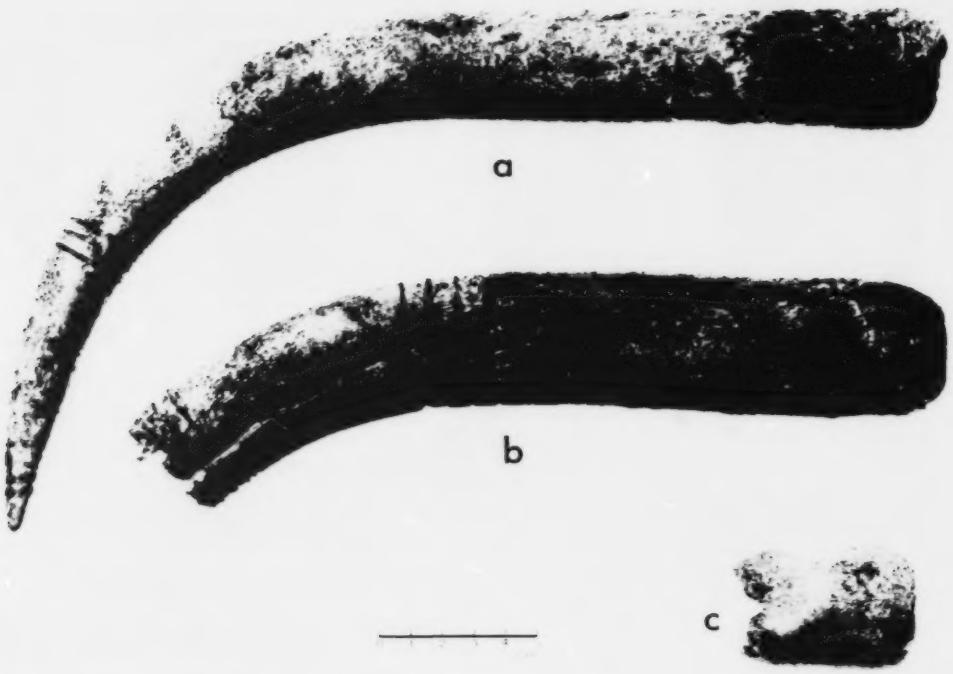


Figure 45. Inscribed Tines and Antler Haft: a, b inscribed tines; c antler haft.
Assigned Components: FN I, a, b; Other, c.

Antler Artifact Fragments n = 36

As with the bone assemblage, a relatively large number of formed fragments were not identifiable to class. Many appear to be tips or bases from pointed tools while others are midsections with rounded or rectangular sections. At least one may be the base of an antler harpoon and several others, fragments of fixed points. For the 36 specimens, there is a cumulative weight of 54.58 g. Component associations include FN I (8), FN II (14), FN III (4), FN IV (6) and unassigned (4).

Cut/Sawn/Sectioned/Ground Antler Detritus n = 105

Numerous pieces of sawn, graved, cut, adzed, polished or burned antler detritus were accessioned into the False Narrows catalogue. This includes 191.3 g of tine (n = 19) and 754.8 g of beam fragments (n = 86). A few complete tines might possibly be antler flakers. However, none had identifiable usewear to support this interpretation. The remainder, as a whole, appear to be by-products of the False Narrows antler industry. The majority of this detritus comes from FN I (16) and FN II (27) with lesser amounts in more recent contexts of FN III (9) and FN IV (9).

SHELL ARTIFACTS

Shell Tools

Mussel Shell Edge Tools n = 19, Figure 46: b-e

A single category of mussel shell edge tools, including cutting, scraping and adzing implements, is defined. The single complete specimen (Figure 46 b) is interpreted as a small adze-like implement with a rectanguloid form. It measures 28 × 16 × 6 mm and has a weight

Figure 46. Shell Tools: b-e shell tools; a, f miscellaneous worked shell. Assigned Components: FN II, a-c, e; FN III, d; Other, f.

of 5 g. The lateral margins and poll are straight and the cutting edge is slightly convex with a single bevel (angle = 45 degrees). All margins and faces are heavily abraded. For the fragment sample, all but three have at least a small portion of the cutting edge intact. The exceptions have one edge ground flat and are interpreted as back margins for adze blades or knives. The majority of the working margins are convex with the remainder being straight. The predominant edge configuration is a single bevel (12) with double bevel (1) and double taper (2) types also represented. An edge angle mean of 44.64 degrees and a mean thickness of 3.95 mm was taken for the collection. Where species could be identified, the mussels are *Mytilus californianus*. The complete adze is assigned to FN II. The remainder are associated with FN I (1), FN II (5), FN III (9) and unassigned (3).

Shell Cups n = 5

A complete valve from a butter clam, another segment from a horse clam, and three fragments of unidentified clam shells have their ventral surfaces stained with ochre. These are interpreted as small cups or cup fragments (after Mitchell 1971: 215-216). None are modified in other ways. The complete specimen measures 51 × 39 × 10 mm. Assigned components are FN I (1), FN IV (2) and unassigned (2).

Miscellaneous Worked Shell n = 9, Figure 46: a, f

Six pieces of ground and cut purple-hinged rock scallop, two half valve segments of California mussel with minimally abraded edges, and one other cut and ground mussel implement are included in this class. While no specimen can be definitively identified as to function, one might be a bowl or cup fragment, two more broken pendant blanks, another an

unfinished gorget or pendant (Figure 46 f) and a fifth, a mussel shell point (Figure 46 a). The latter ((49) × 25 × 6 mm) has blunted lateral margins which are excurvate. The tip and a portion of the base are fragmented. This specimen is assigned to FN II. The remainder are associated with FN I (1), FN III (4), FN IV (2) and unassigned (1).

Ornaments/Ceremonial Items

Scallop Shell Rattles and Fragments n = 45, Figure 47: f, g

Rattles, manufactured from the valves of the weather vane scallop, *Pecten caurinus*, are recorded as paraphernalia for the *sxwayxwey* dance (Suttles 1987: 109). Eight examples, having a perforation below the hinge, and 37 scallop shell fragments were recovered. Two of the specimens are fully complete. With the exception of the perforation, they have no further modification. Complete dimensions for the pair are 117 × 113 × 6 mm and 115 × 110 × 5 mm with hole diameters of 10 and 15 mm respectively. The remaining pieces are similar in all respects, aside from being fragmented. Where the perforation diameter was determined (n = 3), a mean width of 13 mm was taken. Although possibly not from rattles, *Pecten caurinus* fragments are interpreted as such because of their scarcity within the site. A few pieces have notable edge grinding or surface polish. One specimen, a body fragment, has one complete perforation (diameter = 3 mm), and a portion of a second, placed between adjacent ribs. It could possibly be a pendant. As well as body portions (24), hinge fragments (5) and rim segments (8) are present. Four specimens were excavated form Burial 23 which has been associated with the FN I component. The remainder have FN I (7), FN II (15), FN III (5), FN IV (4) and unassigned (10) associations.

Shell Pendants n = 5, Figure 47: a-c, e

Three complete purple-hinged rock scallop pendants, a fragmented pendant of scallop shell and a fifth of unidentified shell are present. The complete specimens are irregular in form despite lateral margins being ground smooth. One (60 × 47 × 9 mm) is semi-lunoid, another is roughly pentagonal (59 × 35 × 4 mm) and the third (39 × 24 × 3 mm) is trianguloid with an additional lateral triangular appendage (Figure 47 a-c). On all three, dorsal and ventral faces are polished. Line perforation diameters are 4, 3 and 4 mm respectively. The fragmentary scallop shell pendant has been intentionally formed although the distal segment is missing (Figure 47 e). It has straight tapered lateral margins and a straight proximal edge. A 3 mm perforation has been punched through. Remnant measurements for the specimen are (40) × (29) × 2 mm. The final pendant fragment ((66) × (50) × 7 mm) is a burned valve segment with a parallel incised line running 6 to 8 mm from the rim edge. A biconical perforation (diameter = 5 mm) is placed along the decorated lateral margin. The original artifact would have been quite a large specimen. The initial three have FN I (1) and FN II (2) associations. The scallop shell pendant is assigned to FN I and the fragment cannot be assigned a component.

Shell Gorgets n = 2, Figure 47: d

A complete specimen and a fragmented piece are interpreted as shell gorgets. Both are manufactured from purple hinge rock scallop shell and both are similar in form. The unbroken gorget is formed from a valve rim segment. The proximal margin is ground concave, giving the piece a crescentic planar form. All margins are ground flat with both dorsal and ventral faces polished (Figure 47 d). A pair of biconically drilled holes, one on either lateral extension, have diameters of 3 mm. The fragmentary specimen is missing one of its lateral sections. It also has a biconically drilled hole (diameter = 3 mm) for line attachment. In size, the specimens are 99 × 35 × 7 mm and (64) × 36 × 6 mm respectively. Only the latter has been associated with a component; it is FN II.

Figure 47. Shell Pendants, Rattles and Gorget: a-c, e shell pendants; d shell gorget; f, g scallop shell rattles. Assigned Components: FN I, a, e; FN II, b, c, f; FN IV, g; Other d.

Shell Disc Beads and Fragments n = 6,444, Figure 48: d

Six thousand, two hundred twelve shell disc beads and 232 fragments were recovered from False Narrows. Most of these specimens were excavated from burial contexts and many remain in articulated strands. A considerable size variation exists between the smallest and largest specimens although attempts to differentiate into meaningful groups did not prove fruitful. In this area, it is noteworthy that on several of the articulated strands, beads were strung without attention to size matching. All but 18 are thought to be clam shell while the remainder, identified by their purple colour, are believed to be mussel. These latter specimens seem to have been used as coloured spacers. In a 100-bead "grab sample", 83 were found to be symmetrically round with centred perforations. All but four had biconical holes for stringing. This sample is thought to be representative of the assemblage. It has a cumulative weight of 11.0 g. With the exception of 80 specimens donated as part of a private collection, and two examples that are assigned to FN II, the full assemblage has been associated with the FN I component.

	mean	*stnd. dev.*	*min/max*	*n*
diameter	6.25	0.76	4.5-7.5	100
thickness	2.08	0.39	1.0-3.0	100
hole diameter	1.47	0.29	1.0-2.4	100

Teredo Beads n = 23, Figure 48: a

Twenty calcaneous tubes from the ship worm, *Bankia setacia*, and three fragmentary pieces are thought to have been used as tube beads. In field notes and catalogue records these are identified as teredo after a separate shipworm genus, *Teredo*. In four separate instances, tubes were recovered in direct association with dentalia and/or shell disc beads. While a few

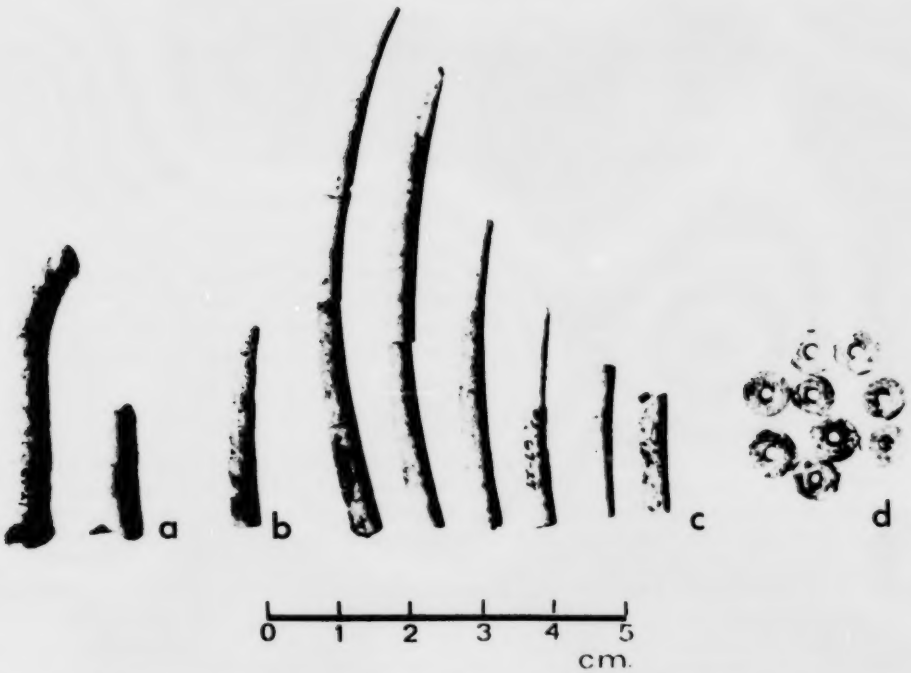


Figure 48. Shell Beads: a teredo shells; b inscribed dentalia shell; c dentalia; d shell disc beads Assigned Components: FN I, b, d; a incorporates specimens from FN II and III; c incorporates specimens from FN I and FN II.

specimens are cut or ground on the ends, the majority are unmodified. Considerable variation exists within length measurement for the complete sample. This has a mean of 11.35 mm ranging between 5 and 47 mm. Shell diameters were less variable with an 8.20 mm section and a 4 to 13 mm range. Specimens are assigned to FN I (19), FN II (1) and FN III (3).

Dentalia Shells and Fragments n = 3,815, Figure 48: b, c

As with the shell disc bead assemblage, almost the entire dentalia sample is burial associated. The tusk-like shell, *Dentalia pretiosum*, could be used in a great many different ways. With the tip removed, it was strung as a tube bead or used as a bead spacer. Dentalia were also found inserted, one into the other, to produce a long chain. One recovered from False Narrows includes 48 specimens. Aside from being used in necklaces, False Narrows dentalia were found in a head band with Burial 10 and in an ornamental covering for Burial 9 (Feature 7).

The dentalia assemblage includes 507 specimens that are fragments without an intact cross section. A majority of the sample have either one or both ends cut or truncated in some other fashion. With one exception, other modification is not present. The exception, with both ends cut, has an inscribed line running at a diagonal along the specimen's length. This has resulted in a "barber pole-like" design (Figure 48 b). The piece is 28 mm long and 4 mm in diameter at the distal end. Again, drawing a grab sample of 100 pieces, a mean length of 34.98 mm and a mean diameter of 4.15 mm were taken. It is noted that on 40 specimens, both ends were cut or abraded; on 26 the proximal end was left intact and the distal end was broken; 11 had an intact tip and a broken base and the remaining three had both ends broken. Component associations for the dentalia are FN I (3,293), FN II (18), FN III (20), FN IV (15) and unassigned (469).

Other Shell Beads n = 1

A singe shell barrel bead was collected from the site. It is 5 mm in diameter and 4 mm in length. A biconically drilled centre perforation has a diameter of 2 mm. It is assigned to the FN I component.

MISCELLANEOUS AND HISTORIC ARTIFACTS

Tooth/Talon Artifacts

Beaver Tooth Tools n = 8 Figure 49: i

Eight beaver incisors, none complete, may have been hafted and employed as tools. Only three however, are modified in any manner. These are split longitudinally. A remnant mean length of 28.33 mm and a weight of 0.67 g were taken for the sample. All but three have at least a portion of the tooth bit edge intact. Four specimens are associated with FN III and the remainder are unassigned.

Miscellaneous Tooth Pendants n = 5, Figure 49: k-n

Three canines from unidentified canids, a fourth from a bear and an elk incisor have been modified into pendants. Of the canid examples, one (42 × 11 × 7 mm) is biconically drilled on the root for stringing. The second (34 × 9 × 6 mm) has a notched root for line attachment. The final specimen ((38) × 11 × 7 mm) is fragmented on the tip and has an unfinished perforation on the root end. The bear canine pendant also is fragmented. It measures (54) × 15 × 9 mm. Line attachment is facilitated through a proximal constriction. Finally, the wapiti incisor (26 × 7 × 5 mm) has had both lateral faces of the root ground flat and a perforation (diameter = 2 mm) drilled transversely across the specimen's proximal end. Associated components include FN (2), FN II (2) and FN III (1).

Eagle Talons n = 11, Figure 49: j

The inner bone cores from 11 otherwise unmodified eagle talons are interpreted as items of personal adornment. All but one are complete. Although these specimens are unworked, the talon form has a proximal bulb-like appendage which could be used for stringing purposes (see Stewart 1973: 144). As a whole, the complete collection has a mean length of 30.10 mm and a mean weight of 1.43 g.

Copper

Copper Artifacts n = 2, Figure 49: a,b

A roughly circular pendant and a single perforated disc have been manufactured of copper. Copper source has not been determined for either. The pendant has an approximate diameter of 35 mm and a 1 mm thickness. A line perforation (diameter = 3 mm) is centred near the proximal margin; otherwise undecorated, the piece weighs 6.0 g. The second specimen is corroded with an intact diameter of 20 mm and a weight of 1.2 g. The perforation is asymmetric and oblong, measuring 10 × 6 mm. The first example could not be assigned to a component, the second is associated with FN I.

Copper Fragments n = 4, Figure 49: c, d

Two thin fragments of sheet copper, a piece of rolled copper possibly used as a bead, and a thick sheet copper fragment comprise the remainder of copper artifacts. Again, none have had material origins identified. The rolled copper piece is slightly tapered, 50 mm long and 7 mm in diameter (Figure 49 c). The weight is 3.4 g. The thick copper fragment (32 × 26 × 2 mm, weight = 6.4 g) is rectanguloid in shape (Figure 49 d). One edge has been scored, possibly to aid in a sectioning of the piece. Neither of the latter specimens can be associated with a component. One thin copper fragment comes from FN I and the other from FN IV deposits.

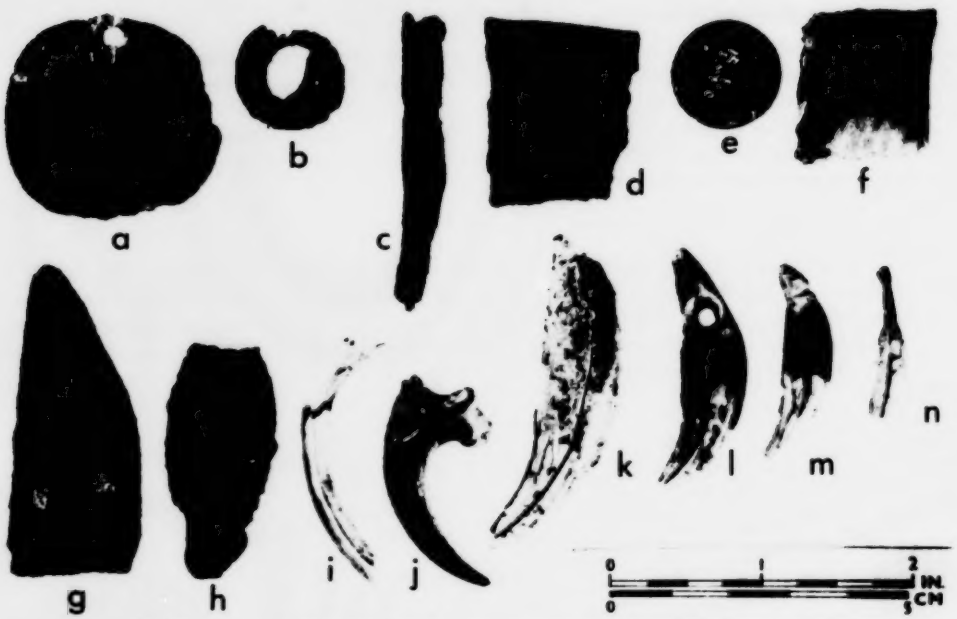


Figure 49. Miscellaneous and Historic Artifacts: a, b copper artifacts; c, d copper fragments; e, f miscellaneous historic items; g, h iron implements; i beaver tooth tool; j eagle talon; k-n miscellaneous tooth pendants. Assigned Components: FN I, b, m; FN II, j, l, n; FN IV, g, h, k; Other, a, c-f, i.

Copper Stained Wood n = 3

Three wood fragments (thought to be cedar) have been preserved on site as a result of copper salt absorption. All three are heavily stained and are found in association with Burial 2. It is possible that they are remnants of a burial box, although this is a highly tentative conclusion.

Historic Items

Glass Beads n = 5

Glass beads at the site are limited to four blue wire spun beads and a facetted "Russian" trade bead. The four wire spun examples have a mean diameter of 6.40 mm. Two of these are slightly asymmetrical. The "Russian" trade bead is hexagonal in cross section. Two of the wire spun beads can be assigned to FN IV, the remainder are unassigned.

Iron Implements n = 2, Figure 49: g, h

A badly corroded projectile point and a rusted knife blade with visible remnants of a former wooden haft are the only implements at False Narrows manufactured from iron that have been catalogued. The projectile point ((40) × 19 × 3 mm) is a stemmed form with rounded shoulders, contracting stem margins and an asymmetric convex base. The blade edge configuration is excurvate. Missing its tip, it has a stem length of 10 mm and a shoulder width of 11 mm. Less rusted, the knife blade is trianguloid with a curved back. Adhering to corrosion on the proximal section are remnants of a former wooden haft. These indicate that the exposed blade was short (22 mm) and stubby. Overall, the specimen measures 53 × 23 × 1.5 mm and weighs 6.4 g. Both piece are assigned to the FN IV deposits.

Miscellaneous Historic Items n = 4, Figure 49: e, f

A gunflint, a brass button, a brown glass bottle stopper and a fragment of green bottle glass constitute the remainder of the historic assemblage from the site. The gunflint, manufactured from a blond French flint, has been little used. It is 26 × 23 × 6 mm and weighs 5.9 g. The brass button (diameter = 18 mm, thickness = 2 mm) is missing its clasp although it would appear to have been of the single-loop variety. None of these items have a secure cultural association with site deposits.

Miscellaneous

A relatively large collection of unmodified materials were accessioned into the False Narrows catalogue. Among the more noteworthy items are ochre samples from 19 separate concentrations, mica flakes from five occurrences, a piece of graphite and a piece of galena. Also recorded, although unworked or water tumbled beyond recognition, are quantities of both shell and lithic materials.

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